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QUALITATIVE VERSUS QUANTITATIVE METHODS AND BEYOND

Since the early 1980s, an important methodological debate—with complex epistemological underpinnings—has been taking place among educational researchers worldwide. At times lively and intemperate enough to be labeled as “the paradigm wars,” recently the heat has diminished and a (perhaps uneasy) truce is in effect. The dispute has focused on the merits, the demerits, and the purported incompatibility of qualitative and quantitative research methods; peacemakers have often suggested that both approaches have their place and that they can fruitfully be combined using mixed methods approaches to research. This entry provides an overview of the key issues that have been discussed.

Historical Antecedents

Debates about knowledge and truth, and how to attain them, have been a part of Western philosophy since ancient times; even then, several different epistemological schools of thought existed, making the arguments among modern research methodologists a continuation of a discussion with ancient roots.

In brief, and following the account given by R. Burke Johnson and Robert Gray in their discussion of the prehistory of the paradigm wars, ancient Greece witnessed the emergence of three schools of thought: (1) the proto-rationalists, absolutists who looked for certainty in entities, for example,

Socrates (470–399 BCE) and Plato (429–347 BCE); (2) the sophists, ontological relativists, for example, Protagoras (490–420 BCE); and (3) the proto-empiricists, realists whose goal was to obtain understandings of what humans see and experience in their everyday lives, for example, Aristotle (384–322 BCE). These camps differed in their conceptions and theories of universal truth, with proto-rationalists viewing truth as unchanging, sophists viewing truth as being changing and relative, and proto-empiricists taking a realist view of truth wherein what is seen is what could be believed as being real and regarding intersubjectivity (i.e., wherein agreement and consensus is emphasized) as a facet of truth. A case can, therefore, be made that the proto-rationalists can be viewed as distant ancestors of the quantitative methods school, whereas the sophists could be viewed as ancestors of supporters of qualitative methods. In contrast, proto-empiricists could be viewed as ancestors of supporters of *both* quantitative and qualitative methods.

Debates about the proper object of knowledge (universals or particulars), the proper way of acquiring knowledge, and the limits of human capabilities in this respect continued through the Middle Ages and the Renaissance to the modern era. By the early decades of the 20th century, Continental philosophical traditions had given birth to hermeneutical or interpretive inquiry in the social sciences and education, while the British empiricist tradition in philosophy (in conjunction with its Continental offspring, logical empiricism or logical positivism) had played a role in the deployment of empirical research methods. In the judgment of many, there seemed to be an

unbridgeable epistemological gap between these two methodological approaches.

The Paradigm Wars

In the 1980s, debates between members of the quantitative and qualitative camps—hereafter referred to as *quantitative purists* and *qualitative purists*, respectively—were so contentious that these divisions were known as *paradigm wars*. The educational psychologist N. L. Gage was one of the first authors to use this phrase, which he considered to be apt because the two positions in the dispute each had some resemblance to the incommensurable paradigms described in Thomas S. Kuhn's classic work *The Structure of Scientific Revolutions* (1962). In the early years of the debate, the opposing positions reflected several stark differences with respect to philosophical underpinnings, with quantitative purists holding assumptions that were, in general, consistent with positivism or even the stronger view, logical positivism (Phillips & Burbules, 2000), and with qualitative purists holding assumptions that were consistent with perspectives such as constructivism, critical theory, idealism, relativism, humanism, and hermeneutics (Denzin & Lincoln, 2011). What made the debate difficult to adjudicate was its complexity; the two sets of purists differed with respect to conceptual issues such as ontology (i.e., nature of reality), epistemology (i.e., nature of knowledge), methodology (i.e., a broad approach to research with general preferences for certain types of designs, sampling logic, analytical strategies, etc.), axiology (i.e., *values*, which are individual beliefs that each researcher holds that guide her or his conduct of research; and *ethics*, which are agreed-on norms, codes, rules, and/or policies—such as the principle of not causing harm to others called non-maleficence—set by professional organizations, government agencies, research bodies, and other units that govern the conduct of research and that make researchers who belong to that unit accountable), rhetoric (i.e., style of discourse used in research reports), knowledge accumulation (e.g., which, depending on the underlying research philosophy, includes generalization, replication, reconstructions, historical revisionism), criteria for evaluating research (e.g., which, depending on the underlying research philosophy, includes concepts such as reliability, validity, trustworthiness, dependability, confirmability, transferability, and authenticity), and the role or research “posture” of the inquirer.

Broadly speaking, then, as noted by Anthony J. Onwuegbuzie and colleagues, quantitative purists believed that research should be objective (ontology); researchers should eradicate their biases, remain emotionally disconnected and uninvolved with the objects of study, and test or empirically justify their stated hypotheses (epistemology); time- and context-free generalizations are possible and optimal, and real causes of events can be determined reliably and validly via quantitative approaches (methodology); research is value free (axiology); research reports should be written with rhetorical neutrality, involving formal writing style using the third person and technical terminology, wherein establishing and identifying causal laws describing individual and/or group behavior is the major focus (rhetoric); external replications represent the apex of research (knowledge accumulation); criteria such as reliability, internal validity, and external validity should be maximized (quality criteria); external sources should determine the ethical standards followed by researchers (ethics); and researchers should assume the role of objective scientists and inform the decision makers, policymakers, and change agents (inquirer posture) (Onwuegbuzie, Johnson, & Collins, 2009).

In contrast, qualitative purists believed that there are multiple realities, which are socially constructed and shaped by the cultural context (ontology); subjective knower and known are not separable, and findings and meaning are cocreated by the researcher and participants (epistemology); time- and context-free generalizations are neither desirable nor possible, it is impossible to differentiate fully causes and effects, and research is hermeneutical/dialectical (methodology); research is value bounded (axiology); research reports should be written with thick (empathic) description, directly and somewhat informally (rhetoric); knowledge (co-) construction should involve engaging with research participants, entering into relationships with them and understanding the meanings they convey and the influence of the social, cultural, and physical contexts in which they live, and may involve observation, interviews, and reconstructions of people's stories (knowledge accumulation); criteria such as trustworthiness, dependability, confirmability, and transferability of findings and interpretations should be pursued (quality criteria); intrinsic processes should determine the ethical standards followed by the researcher, involving a tendency toward transparency (ethics); and the participant should serve as

facilitator for capturing the voices of multiple participants, with the researcher sometimes adopting a transformative, activist stance as an advocate of the participants (inquirer posture).

There was one point, however, on which both quantitative and qualitative purists agreed, but it was a point that heightened the barrier between them rather than lowering it: Both camps adhered to the *incompatibility thesis*, which, as defined by Kenneth R. Howe (2003), is the view that the quantitative and qualitative research paradigms, as well as their associated methods, are philosophically or epistemologically incompatible and thus cannot and should not be mixed together in one research study.

It seems undeniable that—as outlined by proponents of each camp—both quantitative and qualitative research approaches have inherent strengths. Specifically, quantitative research arguably is optimal for identifying prevalence (i.e., descriptive research), relationships (i.e., correlational research, causal-comparative/quasi-experimental research), and cause-and-effect relationships (i.e., experimental research), which, under certain conditions (e.g., large sample, random sample, replicated findings), can be generalized from the sample to the population from which the sample was drawn—allowing quantitative predictions to be made, and a priori hypotheses to be tested, and, consequently, theories to be confirmed or disconfirmed.

On the other hand, it can be argued that qualitative research is optimal for obtaining rich insights into experiences undergone by individuals, and the meanings they attach to them (e.g., using methods such as biography, autobiography, life history, oral history, autoethnography, and case study); and these methods also seem appropriate for studying the beliefs and the practices of groups (e.g., using research traditions such as phenomenology, ethnography, and grounded theory), which, under certain conditions (e.g., thick data collected, data saturation, theoretical saturation, and informational redundancy), can lead to the researcher achieving *verstehen* (i.e., understanding). It is also important for many research studies to take account of the fact that phenomena are situated and embedded in local contexts from which they often cannot be meaningfully abstracted.

Gradual Movement Toward a Middle Ground

Thus, although it does not settle the issue of their compatibility or incompatibility, it is clear that both

quantitative and qualitative research approaches are useful for addressing different sets of questions, with quantitative research being better suited to answering questions of who, where, how many, how much, and what is the relationship among variables of interest, and qualitative research being better suited to answering why and how questions. However, neither research approach alone is useful for answering combinations of questions that involve both sets of questions. Furthermore, both approaches contain inherent weaknesses. In particular, in quantitative research, theories tested might not reflect local constituencies' understandings and might lead to confirmation bias (i.e., failing to observe important phenomena) and meaning making that is too abstract and general to be applicable to specific local situations, contexts, subgroups, and individuals. In qualitative research, knowledge (co-)constructed might not generalize to other people or other settings. A challenge for the mixed methods researcher is becoming competent to carry out both quantitative and qualitative research, as a mixed methods research approach requires; in addition, mixed methods are typically more expensive, time-consuming, and complex to conduct. Nevertheless, for some researchers, integrating qualitative and quantitative methods had logical appeal.

Although a pragmatist movement in social and behavioral science research (e.g., Hilary Putnam, Richard Rorty) began to advocate the use of mixed methods in the 1960s, it gained momentum during the 1980s. These pragmatists adhered to what Howe called the *compatibility thesis*, contending that quantitative and qualitative methods are philosophically compatible. Howe himself rejected the forced choice that is presented by the incompatibility thesis and argued that the compatibilist position “grants something to both paradigms” and, thus, “steers a middle course that avoids running aground on either the positivist or interpretivist methodological islands” (Howe, 2003, p. 38). Moreover, those with a pragmatist orientation adopted an antidualistic stance wherein binaries (e.g., objective vs. subjective, causal vs. acausal, numbers vs. words, and precision vs. description) are replaced with continua, arguing that instead of representing a dichotomy, quantitative and qualitative research paradigms and methods reside on an epistemological continuum, with mixed methods research located at the center and quantitative and qualitative research situated at the end points. According to these pragmatists, such reframing allows quantitative and qualitative researchers

alike to focus more on identifying which methods are most appropriate to address their research questions rather than on paradigmatic concerns.

Furthermore, the pragmatists made the vitally important point that although many research methods are typically associated with one paradigm (e.g., numeric data may be linked only to quantitative research; interview data may be linked only to qualitative research), there is no one-to-one necessary correspondence between research methods and research paradigms. The pragmatists argued that, for example, an experimental study could include qualitative data (e.g., data on side effects), and ethnographic studies could include quantitative data (e.g., attitude scores). Thus, the pragmatist philosophy of *what works* manifested itself in the promotion of mixing and matching research strategies that best address the research question(s) of interest.

During this time, the pragmatist movement was also aided by an influential essay authored by Jennifer Greene and her colleagues, in which they provided the following five rationales for conducting mixed methods research:

Triangulation (i.e., compare findings from quantitative and qualitative analytical strands)

Complementarity (i.e., seek elaboration, illustration, enhancement, and clarification of the results from one analytical strand with findings from the other analytical strand)

Development (i.e., use the findings from one analytical strand to help inform the other analytical strand)

Initiation (i.e., examine contradictions and paradoxes that arise when findings from the two analytical strands are compared that might lead to a reframing of the research question)

Expansion (i.e., expand breadth and scope of a study by using multiple analytical strands for different study phases) (Greene, Caracelli, & Graham, 1989)

As other researchers continued to clarify and to expand on rationales for conducting mixed methods in the 1980s, such as Doren L. Madey, Gretchen B. Rossman, and Bruce L. Wilson, pragmatists called for an end to the paradigm wars.

Since the 1980s, discussion of the paradigm wars has subsided considerably, although some tensions remain between purists on both sides of the “paradigmatic” fence. At the same time, the field of mixed

methods research has continued to develop its identity, and numerous alternative approaches (the use of the term *paradigm* now being avoided) associated with mixed methods research have emerged, including critical realism and a transformative-emancipatory framework (Onwuegbuzie et al., 2009). At least 31 books devoted primarily or exclusively to mixed research have been published, including two handbooks; empirical, conceptual, and methodological articles on mixed methods research have appeared in high-profile journals; two peer-reviewed journals devoted to mixed methods research are being published; journal articles have identified published accounts of mixed methods research in different fields (e.g., Jennifer P. Wisdom and her colleagues’ study of mixed methods in health services research); several journals have produced special issues on mixed methods research; conferences devoted to mixed methods research have been held; special interest groups of professional research associations for mixed methods researchers have been established; and websites devoted to courses on mixed methods research and face-to-face and online mixed methods research are available.

Concurrent with these developments, purists continue to vigorously highlight perceived weaknesses in the field of mixed methods research. For example, some critics have suggested that in addition to attempting to mix incompatible methods, mixed methods researchers tend to exclude discussion of essential superordinate paradigms or assumptions in order to focus on the mechanics of mixing methods, thereby foregoing crucial conversation in the name of pragmatism. The ardent nature of these discussions has prompted some authors to call for mutual respect among all researchers, regardless of epistemological orientation (Onwuegbuzie, 2012). As the field of mixed methods continues to evolve, it is likely that the philosophical differences about the nature of knowledge and meaning that have existed since ancient times will continue to engender discussion and debates regarding the use of purist and integrative methods to understand the world of educational research.

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See also Causation; Experimental and Quasi-Experimental Designs for Research: Campbell and Stanley; Hermeneutics; Kuhn, Thomas S.; Popper, Karl; Positivism; Postpositivism; Probability and Significance Testing

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QUALITY OF EDUCATION

Education quality is notoriously difficult to define. It is possible to identify a number of perspectives on the quality in education linked to different disciplinary and philosophical orientations and underlying assumptions. Although there are tensions, there are also overlaps between perspectives, and government policies may draw on one or more perspective. This entry discusses education quality as seen through economic perspectives, management perspectives, progressive/humanistic perspectives, critical perspectives, and the human capability perspective.

Economic Perspectives

Within this perspective, quality is often defined in terms of the effectiveness and efficiency of education systems in improving learning outcomes. *External effectiveness* refers to the contribution of education systems to earnings, economic growth, and productivity. Eric A. Hanushek and Ludger Wößmann (2008), for example, argue that there is a correlation between improved quality measured in improvements in national test scores and increases in GDP (gross domestic product). *Internal effectiveness* is concerned with the functioning of institutions and appears primarily in the large, methodologically diverse literature on school effectiveness. At a general level, quality is equated with the “value added” by schools to learner performance, once learner background and school context variables are accounted for. It is used as a basis for comparing performance between schools and increasingly between countries using the results of international assessments of learning. Models of school effectiveness vary but typically identify the existence of a safe and orderly school environment, adequate facilities, support for academic success, a rigorous

curriculum, teacher preparedness, classroom resources, and effective instruction as important for raising achievement.

Internal efficiency is conceived as the success of education systems in converting inputs (money, human, and material resources) into outputs, that is, as the ratio of inputs to outputs. Cost–benefit analysis provides a way for planners to determine which inputs provide the best “bang for your buck,” that is, lead to the biggest improvements in outcome per unit cost. *External efficiency* on the other hand is concerned with the individual and societal rates of return to education of different kinds of investment at different levels or sectors of the system (see, e.g., Psacharopoulos & Woodhall, 1985).

The advantages of the economic perspective for policymakers and planners is that it makes use of easily objectifiable and quantifiable measures and indicators of quality that can readily inform policy. Critics, however, draw attention to the narrow understanding of education quality that is often equated with scores on standardized tests and the absence of an explicit view of learning. They also highlight the linear nature of the input–output model of schooling that gives limited attention to the broader economic, social, and political contexts of education and to the processes of teaching and learning at the microlevel. In treating education quality primarily as a “technical issue,” they pay less attention to the normative aspects of quality reflected, for example, in the values underpinning the curriculum.

Management Perspectives

Closely allied to economic perspectives are those arising from the management literature, including that on total quality management in education. Like the economic perspective, it is concerned with the effectiveness and efficiency of organizations in delivering outcomes, although these can be defined both in absolute terms (i.e., in relation to predetermined norms and “standards”) or in relative terms (i.e., as meeting the needs of different clients of education and consumers of educational products). Given this complexity, Diana Green (1994) argues that it is not possible to deal with quality as a unitary concept, and the best that can be achieved is to define clearly the criteria that each stakeholder uses when judging quality and to take into account the competing views when assessment of quality is undertaken. The attractiveness of the literature on total

quality management is that it provides clear guidelines for practitioners intent on improving learner outcomes. It is, however, subject to similar criticisms as economic perspectives, for example, for treating education as a “commodity” that can be improved through technical means rather than a complex set of human processes subject to wider social relations of power and inequality and for treating learners, parents, and employers primarily as passive “clients” or “consumers” of education rather than as active agents with a range of motives and interests linked to wider social relations.

Progressive/Humanistic Perspectives

At a philosophical level, proponents of this perspective draw on the liberal humanist philosophical tradition in education dating to John Locke and Jean-Jacques Rousseau. This perspective sees human nature as essentially good and human beings as autonomous and learners at the center of meaning making. This often gives rise to a commitment to forms of learner-centered pedagogy supported by constructivist views of learning such as those proposed by John Dewey (1916), in which people learn how to construct their own meanings and to integrate theory and practice as a basis for social action, or Jean Piaget’s (1972) advocacy of a more active and participatory role for children in their learning. More recently, scholars within this tradition have been influenced by sociocultural theory such as that proposed by Lev Vygotsky (1978) that draws attention to the socially and culturally mediated nature of learning. Some scholars and activists have also begun to articulate a view of education quality as integral to education for sustainable development where the quality of the curriculum, for example, is assessed in relation to its contribution to raising awareness of environmental concerns and supporting sustainable human development.

The progressivist/humanist perspective has been influential in informing rights-based approaches to education such as those adopted by the various UN organizations and nongovernmental organizations around the world. Here, quality is equated with the ability of education systems to guarantee the rights of all learners (regardless of social class, religion, language, gender, or sexual orientation) to an education that is free of forms of discrimination and that allows them to realize further rights including participation in democratic societies, linguistic and religious freedoms, sustainable livelihoods, and

well-being. Progressivist/humanist perspectives have provided a strong normative basis for understanding quality. They have been influential in informing curriculum design, teacher training, and pedagogy in many parts of the world and for challenging authoritarian, teacher-centered approaches based on behaviorist principles that continue to inform policy and practice in many parts of the world. It can be argued, however, that they are less useful as a tool for educational planners in terms of identifying quantifiable indicators of quality and, therefore, need to be complemented by more technical approaches. Critics from non-Western traditions have also critiqued the individualistic basis of some Western humanist assumptions that underpin, for example, notions of learner centeredness and counterpose this to more collectivist and communitarian approaches to learning (Tabalawa, 1997).

Critical Perspectives

Many more critical perspectives on education quality emerged in the 1960s and 1970s in the context of the emergence of worker, feminist, and antiracist movements in the Western world and anticolonial struggles in the formerly colonized world. Critical perspectives encompass a wide range of views on education quality, although they share in common an underlying view of education as producing and reproducing forms of wider social inequality. In relation to gender, for example, the quality of education is seen as inextricably linked to the reproduction of gender-based inequalities through the schooling system, for example, through the propagation of gendered stereotypes in the curriculum, the failure of schools to close the achievement gap between boys and girls, and gender-based violence. Researchers and activists interested in race equality draw attention to the reproduction of inequalities and stereotypes based on “race,” language, ethnicity, and religion, while those interested in socioeconomic inequality draw attention to the role of educational organizations in reproducing class inequalities through forms of differentiation and a curriculum that favors middle-class values and dispositions. In many of these perspectives, a good quality education is also seen to have a *transformative* role in providing learners with the knowledge, skills, and raised consciousness to emancipate themselves from different forms of oppression. For critical scholars such as Paulo Freire (1970) and Antonio Gramsci (1975) for instance, the nature of the curriculum and issues of

pedagogy were seen as central to challenging the existing social order (although with different implications for pedagogy—critical and emancipatory in the case of Freire and didactic in the case of Gramsci). Within this perspective a good quality education is defined as one that prompts social change, that has a curriculum and teaching methods that encourage critical analysis of social power relations and of ways in which formal knowledge is produced and transmitted, and that encourages active participation by learners in the design of their own learning experience. Another source of critical perspectives has come from anticolonial activists such as Julius Nyerere (1967), Steve Biko (1987), and Mahatma Gandhi (1910). They share in common a critique of the individualistic and instrumental nature of colonial schooling and counterpose it to more communitarian and human-centered approaches linked to indigenous cultural norms and values.

Critical perspectives are important for drawing attention to the impact of wider social relations of power and inequality on the processes and outcomes of schooling. The work of some critical pedagogues such as Freire and of feminist and antiracist scholars have had a wide impact on policy and practice in different settings and across different levels and sectors of education. Much of the literature within the critical tradition has, however, focused more on critique than on the search for viable alternatives to existing practices and as a consequence has had less to say in the form of specific recommendations for policy and practice.

Toward a Rapprochement? A Human Capability Perspective

More recent work on the quality of education has attempted to develop a rapprochement between different perspectives. Drawing on the work of the economist Amartya Sen (1999, 2009), this work defines a good quality education as one that enables all learners to realize the capabilities they require to become economically productive, develop sustainable livelihoods, contribute to peaceful and democratic societies, and enhance well-being (Tikly & Barrett, 2013). In keeping with Sen’s ideas, the quality of education is perceived not purely in economic terms but as having intrinsic human worth and contributing to the realization of human rights and well-being through the development of a range of capabilities (opportunities) that can be converted into valued functionings (ways of being and doing).

Relevant capabilities may vary according to context but encompass literacy, numeracy, and a range of affective and cognitive outcomes that should be determined through processes of informed public debate. In keeping with transformative perspectives, education quality can contribute to the realization of social justice through a focus on the institutional barriers that prevent members of some disadvantaged groups from converting educational resources of one kind or another into valued functionings. Although in its infancy, the language of capabilities has begun to influence the policies of some governments (although time will tell as to whether this is a rhetorical level or whether it reflects a more profound philosophical commitment). Critics of the human capability perspective argue that through focusing on individual capabilities, it fails to sufficiently take account of inequalities between social groups based on wider structural inequalities, although this is refuted (Sen, 2009). Given the infancy of this perspective, more work needs to be done in defining and measuring human capabilities in a way that is useful for policymakers and planners.

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See also Bildung; Critical Theory; Dewey, John; Economic Development and Education; Education, Concept of; Freire, Paulo: *Pedagogy of the Oppressed* and Critical Pedagogy; Human Capital Theory and Education; Liberal Education: Overview; Peters, R. S.; Piaget, Jean; Rousseau, Jean-Jacques; Vygotsky, Lev

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QUINTILIAN

Marcus Fabius Quintilianus (ca. 35 to ca. 98 CE), usually referred to as Quintilian, was a respected orator and teacher in ancient Rome, and he remains an important figure today as the author of a 12-book treatise on education titled *Institutio oratoria*. Published around 95 CE, *Institutio oratoria*, or Education of the Orator, summarizes the Roman educational system of the time, outlining the teaching methods to be used from childhood through adulthood. With an emphasis on oratory and rhetoric (which he defined as the art of persuasion), the ultimate goal of the educational system that Quintilian prescribes was *facilitas*, or facility: The ability to speak effectively in any situation. Focusing on the essential skills of speaking, reading, and writing, Quintilian wanted his students to become broadly educated citizens capable of taking action in public affairs, able to think critically and speak eloquently on numerous topics. He also argued that morals should be a part of a young man's educational curriculum, rejecting the idea that virtue is acquired naturally. He wanted his students to become citizen-orators, men of good morals and effective rhetorical skills. This entry discusses Quintilian's ideas about teaching rhetoric and oratory, their relationship to the Roman educational system of his time, and their relevance to education today.

Quintilian advocated that teachers of rhetoric and oratory can also be practitioners. Therefore, he practiced oratory himself by working as a pleader,

arguing cases in courtrooms. While apparently well known for this work making forensic arguments, Quintilian had a greater reputation as an educator. He operated his own school and made a name for himself as a master teacher. In ancient Rome, schools were typically private businesses, and parents had to pay for their children to attend. Quintilian was apparently respected enough that he received a salary from the public treasury, an uncommon practice at the time. His rhetorical skills have been criticized by some historians because he was not involved in public discourse as were other well-known classical rhetoricians. He has been compared unfavorably with the statesman Cicero (106–43 BCE) whom he admired and referenced frequently in *Institutio oratoria*. However, Quintilian never aspired to a political career such as Cicero's; he was a teacher first and foremost. Also, although only about a century separated them, they lived in different political environments. At least until the final years of Cicero's life, Rome was much more democratic. Quintilian lived in a Rome that was governed by emperors, and it was an impressive feat in itself that he could teach rhetoric for so long without drawing the ire of his rulers.

Institutio oratoria

Institutio oratoria exists as a compendium of Roman teaching practices that had already been in place for more than a century and that had been largely inherited from the Greeks. However, Quintilian also provided his own judgments regarding conflicting perspectives, making the comprehensive *Institutio oratoria* more than simply a compilation of others' pedagogies. In his writing, he refrains from dogmatism and attempts to discuss conflicting teaching practices with fairness, ultimately offering his definitive opinions about how students should be educated. During the nearly 2,000 years since its first publication, *Institutio oratoria* has had varying degrees of influence on education in Western civilization. While Quintilian periodically dropped out of popularity, his work experienced periods of resurgence throughout history, most notably during the Renaissance, beginning in the 1400s and gradually fading in the 1800s. Quintilian's work remained indirectly influential to educational programs even after that, and by the mid-20th century, renewed appreciation for Quintilian emerged. The *Institutio oratoria* remains significant today. No other single document provides as much insight

into the educational system as it actually existed in antiquity.

After retiring from a 20-year career in education, Quintilian spent 2 years writing the *Institutio oratoria*. He stated that friends had asked him to write a book on "the art of speaking." Once convinced to take on the project, he intended to be comprehensive, explaining that becoming a good orator required years of educational lessons that built on one another. Quintilian believed that education begins in infancy and continues through adulthood. Most texts written about rhetorical education at the time ignored elementary education, so *Institutio oratoria* departed significantly from the common practice by addressing education even during infancy, going so far as to mention that a child's nurse should not speak ungrammatically.

During the course of the 12 books, Quintilian seems to address different audiences. Early books focusing on childhood education are directed to parents, middle books are directed toward teachers, and later books address adult orators themselves. He covers the aims of rhetoric and discusses oratorical style. Several books address technical aspects of language, including invention, parts of speech, ornamental figures, and tropes. While he was predominantly concerned with rhetoric, his examination of language and how to use it to certain effect became influential to the later study of literature.

The Roman Educational System

In the Roman educational system, two levels of masters taught the students: the *grammaticus* and the *rhetor*. Under a *grammaticus*, students studied writing, beginning with letters and sentences, and then moved on to poems and speeches. When a boy graduated to study with the *rhetor*, he built on what he learned from the *grammaticus* but went from studying speech and writing to beginning to make his own compositions. (Although girls may have been present for the basic education offered by a *grammaticus*, the study of rhetoric was reserved exclusively for boys, a reflection on the era and not on Quintilian's pedagogy.) The final stage of preparation was *declamatio*, or declamation, when students made speeches on fictitious themes about court cases or political issues. After being given a prompt, the student was expected to deliver an effective speech proposing a solution, bringing together all of the skills he had learned. In all of the students' studies, both from the *grammaticus* and the *rhetor*, there

was an emphasis on *imitatio*, or mimesis, which allowed students to use existing texts as models to follow until they were skilled enough to create their own original speeches.

While Quintilian's curriculum, like all of Roman society, emphasized oratory over written communication, he recognized the value of writing and reading. The educational system was built on the interplay of reading, writing, and speaking, with listening as a valuable supplement. He states in *Institutio oratoria* that speaking, reading, and writing "are all connected, so inseparably linked with one another, that if any one of them is neglected, we labor in vain in the other two" (Murphy, 1987, p. 125). It was not enough for a young man to practice reading, speaking, and writing on his own; he needed to work on these skills with the guidance of a teacher. Quintilian recognized that writing and speaking were reciprocally beneficial to one's learning and ability to communicate successfully. Rhetorical effectiveness in any situation, spoken or written, was the goal. Quintilian, who claimed that an orator could not be truly effective unless he was also a good man, recognized that true *facilitas* was an unachievable ideal. Still, he argued that educated men should "strive to gain the summit" of perfection (Murphy, 1987, p. 8).

Contemporary Relevance of Quintilian's Work

Much has obviously changed since Quintilian described the Roman educational system in *Institutio oratoria*. In the modern age of rapid technological advances, it is hard to conceive of a society in which oratory was the primary means of communication. As one example of the historical differences, in ancient Rome, physical texts were much more rare; therefore, published writing was savored and appreciated. The mass production of printed texts did not begin for more than 1,000 years (let alone the existence of the digital texts prevalent today). As a consequence, the act of reading was different; even in private, people typically read aloud, carefully enunciating the words. Therefore, in Quintilian's age, writing, speaking, reading, and listening were interrelated in ways that we might not immediately recognize today.

Obviously, some of Quintilian's pedagogy has become outdated. It is hard to understand his view that only a moral person could be a good orator

as anything but idealistic. Also, although he did see value in revision in writing, Quintilian did not fully share—nor could he likely even conceive of—modern educators' view of the writing process, with prewriting, drafting, revision, and editing over the course of multiple drafts. Moreover, critics have argued that the Roman educational system's focus on imitation hindered the development of students' ability to think for themselves. The system has also been criticized for focusing so intently on rhetoric and not giving more emphasis to history or philosophy.

Despite the differences between the 1st and the 21st centuries, aspects of the *Institutio oratoria* remain relevant and worth studying. Quintilian showed a keen insight into child psychology, recognizing that children begin learning in infancy. He explained the need for scaffolding for students to build on what they had already learned. He recognized important connections among speaking, writing, and thinking. Although views of rhetoric have shifted away from an emphasis on oratory, Quintilian's objective of rhetorical effectiveness in any situation remains applicable—even if rhetorical situations might now include published op-ed commentaries, televised speeches, blogs, or other 21st-century forms of communication that he could never have anticipated.

Andrew Bourelle

See also Aristotle; Augustine; Cicero; Isocrates; Newman, John Henry (Cardinal); Plato; Rhetorical Canons; Socrates and Socratic Dialogue; Sophists

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R

RACISM AND MULTICULTURAL ANTIRACIST EDUCATION

To appreciate the need for multicultural antiracist education, it is necessary first to dwell briefly on the nature of contemporary racism. This entry then reviews the forms that multicultural and antiracist education has taken in Britain, the United States, and Australia. Next, it examines the general demise of multiculturalism, before concluding with a commendation of multicultural antiracist education, including a look at how this might work in practice.

Defining and Classifying Racism

To encompass the multifaceted nature of contemporary racism, it is important to adopt a broad conception of racism, rather than a narrow one, based, for example, solely on notions of overt biological inferiority. Racism can be centered on cultural and/or religious factors as well as biological ones, or it can be based on a combination of both biological and cultural and/or religious factors. Racism can be unintentional as well as intentional; it can be direct or indirect; and it can be overt as well as covert. Moreover, seemingly positive attributes may ultimately have racist implications. For example, the subtext of statements such as “Black people are good at sports” might be “Black people are not good at academic subjects.”

Racism can be dominative (direct and oppressive) as well as aversive (by exclusion and cold-shouldering)

(Kovel, 1988). Racism can also become (more) apparent given certain stimuli. At soccer matches, for example, racist chanting can lead to others joining in. It should also be borne in mind that sentences that begin, “I’m not racist but . . .” will inevitably introduce a racist feeling or thought. Finally, racism is often color coded, but it can be non-color coded—anti-Semitism being an obvious example. It may also not be clear whether racism is color coded or non-color coded. Islamophobia, for example, may be related to headscarves and beards, to skin color, or to a combination. Of course, there can be permutations among these various forms of racism.

Multicultural Versus Antiracist Education

Throughout the 1970s and 1980s, and into the 1990s in Britain, there was an ongoing debate between those whose position was broadly liberal and those who were mainly politically on the radical left (*liberal* is used here in its U.K. sense, to refer to “middle-of-the-road” politics, as compared with the U.S. usage, which often designates a left-of-center political position). In Britain, while liberals wished to promote multicultural education (celebrating the diversity of cultures that make up British society), the latter advocated antiracist education (viewing the institutional racism of British society as the fundamental problem).

In other parts of the English-speaking world, issues and concerns, and in particular terminology, were somewhat different. In the United States, the debate was between multicultural educationists and

critical multicultural educationists, the former predominantly politically liberal, the latter politically left and intent on challenging the dominant Eurocentric ideology of U.S. education. More recently, Marxists Peter McLaren and Ramin Farahmandpur (2005) have advocated revolutionary multiculturalism, as opposed to “critical multicultural education,” as a framework

for developing a pedagogical praxis . . . [which] opens up social and political spaces for the oppressed to challenge on their own terms and in their own ways the various forms of class, race, and gender oppression that are reproduced by dominant social relations. (p. 147; see also McLaren & Ryoo, 2012)

For a number of years, critical race theory, which sees “race” as the overriding form of oppression rather than social class, has been a dominant force in a number of fields as well as in education in the United States. More recently, critical race theory has been adopted in the British education context (e.g., Gillborn, 2008; for a Marxist critique, see Cole, 2009).

In Australia, the left has tended to advocate an antiracist multiculturalism against “the ‘spaghetti and polka’ approach [of the ‘simple pluralist model of multicultural education’]” accompanied by “anti-racist strategies to reduce discrimination in the school system and address the issues of racism and cultural identity to all students throughout mainstream curricula” (Cope & Poynting, 1989, pp. 234–235).

The Demise of Multiculturalism

What advocates of multicultural and antiracist education have in common is a belief in the multicultural *society*, in multiculturalism. In recent years, there has been a decline in multiculturalism in the “developed” countries. An editorial in the online *Journal of Policy Futures in Education* (Peters & Besley, 2014) has succinctly described this demise. In analyzing Islamophobia since 9/11 and against the background of the Iraq War; the terrorist attacks in New York, Washington, Madrid, and London; and a number of other critical incidents, it explains that European states have officially turned away from the notion of state multiculturalism. In 2010, German Chancellor Angela Merkel stated that multiculturalism in Germany had “failed utterly” and indicated that it was an illusion to think

that Germans and *Gastarbeiters* (guest workers) could live happily together. Merkel’s position was repeated in 2011 by the then President of France, Nicolas Sarkozy, who lamented, “We have been too concerned about the identity of the person who was arriving and not enough about the identity of the country that was receiving him [*sic*].” Merkel’s and Sarkozy’s comments were quickly supported by former prime ministers of Australia and Spain, John Howard and José Maria Aznar, respectively. In February 2011, British Prime Minister David Cameron echoed the criticisms of state multiculturalism, arguing that

under the doctrine of state multiculturalism, we have encouraged different cultures to live separate lives, apart from each other and the mainstream. We have failed to provide a vision of society to which they feel they want to belong. We have even tolerated these segregated communities behaving in ways that run counter to our values. (GOV.UK, 2011)

Cameron’s target was Islamic extremism and the process of radicalization, and although he was careful not to lump all Muslims together, his contrasting of what “they feel” and “our values” serves to accentuate notions of “us” and “them.” He went on to state, “We need a lot less of the passive tolerance of recent years and a much more active, muscular liberalism” (GOV.UK, 2011). Partly in response, in Britain and elsewhere in Europe, there were calls for “integration” and for a “community cohesion agenda” comprising tougher immigration and asylum laws, citizenship tests, compulsory citizenship education, and new employment policies giving preference to nonmigrant workers.

In the United States, Barack Obama, the country’s first African American president, has been elected to two terms. Although his election is to be welcomed as of great significance symbolically by all those who believe in multiculturalism and, in part, reflects the fact that the “White establishment” is becoming a minority, there is little else to celebrate. White men still hold the power, and, disturbingly but not surprisingly, given the rise of the Tea Party under Obama, a recent poll found that the majority of people in the United States held racist views (Jones, 2012). Moreover, Obama has continued and reinforced U.S. imperialism.

Multicultural Antiracist Education

In Britain, in terms of actual practice in schools, most schools have remained monocultural (promoting “British culture and values,” as advocated by Cameron above, whatever that may mean), some have practiced multicultural education, and only a few have actually put antiracist education into practice.

The antiracist critique of monocultural education in the United Kingdom is that in denying the existence of the cultures of minority ethnic communities or marginalizing them, it was and is profoundly racist. The antiracist critique of multicultural education is that it was and is patronizing and superficial. It was often characterized as the three “Ss,” “saris, samosas, and steel drums” (cf. “spaghetti and polka” in Australia) and was taught overwhelmingly by people outside of the culture they were teaching about (for a discussion, see Cole, 1992). Up until the late 1990s, with their prognoses that Britain is an institutionally racist society, antiracists were branded as “loony lefties” and ostracized by the mainstream. It took the Stephen Lawrence Inquiry Report (Macpherson, 1999) to change this. The report—which followed a lengthy public campaign initiated by the parents of Black teenager Stephen Lawrence, who was murdered by racists in 1993—could have gone further in its castigation of the inherent racism in British society. Nevertheless, for antiracists, it is a milestone in being the first acknowledgment by the British government of the existence of widespread institutional racism, an admission now seriously marginalized in the wake of the demise of multiculturalism and in the continuance of racism in U.K. society (Cole, 2011).

What then is to be done? Given advances in technology in recent years—most significantly the World Wide Web that enables authentic voices to be heard—*multicultural antiracist education* is now a viable proposition. Using the web creatively, multicultural antiracist education should be about the importance of antiracism as an underlying principle and about the promotion of respect and nonexploitative difference in a multicultural world. Following is an example of multicultural antiracist education derived from Cole (2011), involving learning/teaching about multiculturalism and racism in Australia. The antiracist element is in roman text, with the multicultural component in italics.

Multicultural antiracist education would focus on the fact that the indigenous peoples of Australia

and their supporters view Captain Cook’s arrival over two centuries ago as an imperialist colonial invasion. *The students would discover that, at the time of the invasion, there were up to four hundred indigenous nations and over two hundred languages, clearly indicating a plethora of cultural formations.* Given access to a comprehensive range of resources pertaining to life in Australia, students would discover that in reality, multicultural Australia is a racialized capitalist society; that is to say a society in which certain groups are falsely categorized as belonging to distinct “races,” “race” itself being a discredited scientific concept. The country is stratified on lines of ethnicity, class, and gender, with Australian-born and English-speaking white male immigrants at the top of the hierarchy and Aboriginal women at the bottom. *Students would find out that the dominant culture is the culture of Anglo-Australians, and that Aboriginal art, for example, is used as a selling point for tourism,* while indigenous communities continue to live in the most appalling conditions. Students would learn about “land rights” and other struggles, and the economic and ecological arguments pertaining to these rights. *They would be able to relate these arguments to traditional spiritual beliefs that have links with socialism: the land belongs to the people and the people belong to the land.* They would discover that Aboriginal communities have faced ongoing exploitation and oppression since the U.K. invasion. *Towards the end of 2012, The New South Wales Aboriginal Land Council sought compensation for what it described as “cultural vandalism.”* Students would relate Australian indigenous struggles against injustice to other struggles for social justice in Australia, and to struggles worldwide. (pp. 179–180)

Given the multiple, though country-specific, forms that racism takes in the modern world, and in light of current attempts to denigrate multiculturalism, multicultural antiracist education should be a major priority.

Mike Cole

See also Critical Race Theory; Identity and Identity Politics; Immigrants, Education of; Multiculturalism; Religious Symbols and Clothing; Stereotype Effects and Attributions: Inside and Out; Toleration

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RADICAL CONSTRUCTIVISM: ERNST VON GLASERSFELD

Ernst von Glasersfeld (1917–2010), a cyberneticist by training, was the creator and major exponent of the amalgam of psychological, philosophical, and educational positions known as radical constructivism (RC). Constructivism more generally has had enormous impact in science and mathematics research and pedagogy from the 1970s to the present time, with review after review saying it is the most influential theory in these fields. Within constructivism, von Glasersfeld’s RC has commanded a large following.

Von Glasersfeld published well more than 100 papers, book chapters, and books in fields such as mathematics and science education, cybernetics, semantics, and epistemology. Two important books are *Construction of Knowledge* (1987) and *Radical Constructivism: A Way of Knowing and Learning* (1995); his major articles are gathered in *Key Works in Radical Constructivism* (2007). He was a philosophical autodidact who acknowledged Giambattista Vico (1668–1744) and Bishop George Berkeley (1685–1753) as the two major influences on the crafting of his own RC theory with Jean Piaget as the modern theorist from whom he took most inspiration.

The Core of RC

Von Glasersfeld repeatedly affirms that the core theses of RC are as follows:

1. Knowledge is actively constructed by the cognizing subject, not passively received from the environment.
2. Coming to know is an adaptive process that organizes one’s experiential world; it does not discover an independent, preexisting world outside the mind of the knower.

These theses embody the typical constructivist mix of psychological (how one comes to know) and philosophical (what knowledge is) claims. The philosophical positions of RC are contentious and, given the widespread educational influence of the doctrine, they deserve close scrutiny. Through examination of von Glasersfeld’s many writings, the foregoing can be elaborated and the following epistemological and ontological theses of RC can be delineated (as his position is indeed radical, it is

important to see his own phrasing of key points, so in the discussion that follows, several key passages will be quoted):

- RC1. Knowledge is not about an observer-independent world.
- RC2. Knowledge does not represent such a world; correspondence theories of knowledge are mistaken.
- RC3. Knowledge is created by individuals in a historical and cultural context.
- RC4. Knowledge claims are about individual experience rather than the world.
- RC5. Knowledge is constituted by individual conceptual structures.
- RC6. Conceptual structures constitute knowledge when individuals regard them as viable in relationship to their experience; constructivism is a form of private pragmatism.
- RC7. There is no preferred epistemic conceptual structure; constructivism is a relativist doctrine.
- RC8. Knowledge is the appropriate ordering of an experiential reality.
- RC9. There is no rationally accessible extra-experiential reality.

Empiricist Philosophy

Clearly all RC1 to RC9 theses arise from von Glasersfeld's fundamental commitment to empiricist philosophy. He writes in different autobiographical reflections that the first philosophy book he encountered, which was during his war exile in Ireland, was Bishop Berkeley's *Principles of Human Knowledge*. It left more than a lasting impression; it framed his whole philosophical development. It is noteworthy that he nominates 1710 as the greatest year in the history of philosophy as it was the year that both Berkeley's *Principles* and Vico's *On the Most Ancient Wisdom of the Italians, Unearthed From the Origins of the Latin Language* was published. The former lays out in quintessential form the philosophy of British empiricism, while the latter expounds the position that we can know only what we make, the *verum factum* principle. The nomination of Berkeley and Vico as philosophical mentors is noteworthy because both were among Newton's staunchest 18th-century critics and were opponents of the new science of Galileo and Newton.

All the core commitments of British empiricist philosophy, but especially Berkeley's idealist variant, are preserved and endorsed in RC: Knowledge

is something that individuals create and adjudicate; experience is the raw material of knowledge claims, thus, there is no immediate, epistemic access to the external world; once individual cognitive activity is recognized, it is assumed that cognitive claims are compromised, and knowledge of an external reality becomes impossible.

Idealistic Ontology

Von Glasersfeld's idealist ontology (RC9) has been widely criticized by philosophers. At different points, he professes "mere" agnosticism about the external world, saying that there might be such a thing but we have no access to it and can know nothing about it. But then at other points, he slides over into full-blown ontological idealism as when in a 1992 interview, when asked about constructivism and reality, he replied,

The main difficulty of the question arises from the word "exist." In our human usage, it means to have some location in space, or time, or both. But since space and time are our experiential constructs, "to exist" has no meaning outside the field of our experience, and whatever an independent ontological reality may do, it is not something we can visualize or understand. (von Glasersfeld, 1992, p. 174)

This is consistent with his earlier claim that radical constructivism, thus, is *radical* because it breaks with convention and develops a theory of knowledge in which knowledge does not reflect an "objective" ontological reality, but exclusively an ordering and organization of a world constituted by our experience. The radical constructivist has relinquished "metaphysical realism" once and for all. (von Glasersfeld, 1987, p. 109)

But metaphysical realism is precisely the claim that there exists something beyond our experience, and that something includes the bodily self who is having the experience.

Subjectivist Epistemology

Irrespective of RC9, RC1 and RC2 maintain that scientific and everyday knowledge claims are simply not about any such external world; they are about our private experiential world. Thus,

the fact that scientific knowledge enables us to cope does not justify the belief that scientific knowledge

provides a picture of the world that corresponds to an absolute reality. (von Glasersfeld, 1989, p. 135)

Any epistemology that formulates the problem of knowledge in terms of a subject looking at an object and asking how well his or her experience or sensations reflects the nature or essence of the object is quintessentially Aristotelian, or more generally empiricist—even if the conclusion is that sensory experience does not reflect properties of objects at all. Of course, Aristotelians were direct realists about perception—that is, the objects of perception were material bodies. Later, empiricists were largely indirect realists—that is, the objects of perception were sense impressions generated, it was supposed, by material objects.

It is not coincidental that modern radical constructivists, once having formulated the epistemological problem in empiricist terms (RC4 and RC8), then endorse versions of Berkeley's savage critique of it, and end up with relativism (RC7) and, for von Glasersfeld and the more consistent, with idealism (RC9).

Individualism

Von Glasersfeld is thoroughly individualist in his analysis of the problem of knowledge. A person's mental states (or structures) are the repository of knowledge (RC4 and RC5), and it is the individual who adjudicates knowledge claims (RC6). This individualism might be understandable in discussing "everyday knowledge," where people think about what to have for dinner and whether the kettle is boiling, but it is inadequate for analyzing the adequacy or otherwise of scientific knowledge. Is acceleration invariant in inertial systems and why? What is produced in photosynthesis and why? What is the order of crystallization of minerals in a cooling acidic magma and why? In these cases, individual cognition depends on public cognition to be formulated and, importantly, to be appraised. Feral children have no prospect of thinking anything about inertial systems or rates of crystallization because they have no language, or at least none that encapsulates any scientific content. They have lots of Berkelian experience and stimulation, but none of this gives rise to concepts of gravity, acidity, or inertia.

RC recognizes that individual knowledge claims have to be formulated in a language, that concepts presuppose words, that words entail meanings, and meanings presuppose communities of language users. Von Glasersfeld (1989) says that

from the constructivist point of view . . . language users must individually *construct* the meaning of words, phrases, sentences, and texts. Needless to say, this semantic construction does not always have to start from scratch. . . . But the basic elements out of which an individual's conceptual structures are composed and the relations by means of which they are held together cannot be transferred from one language user to another . . . they must be abstracted from individual experience. (p. 132)

There are good grounds for believing that all of these assertions are false. The fundamental error is the endorsement of an individual, abstractive theory of language acquisition. To put the matter starkly, individuals do not *construct* the meaning of words, they *learn*, or *mislearn*, the meaning of words. It is, of course, individuals who come to learn a language, and in this trivial sense, one might say they construct a language, but this terminology is most misleading. Learning does require attention and intellectual activity on the part of the learner; in this sense, there is intellectual construction occurring. But this undisputed sense of construction does not imply any full-bodied construction of meaning by individuals. Individuals learn meanings, they do not construct them. This was the point emphasized by Vasili Vasily Davydov and other exponents of Lev Vygotsky's linguistics; it is the point at which such social constructivists separated from the individual constructivism of Piaget and von Glasersfeld.

The issue is of some moment for science and mathematics education. Most constructivists do recognize that there is a public, symbolic, created world of science and mathematics that children have to be introduced to, the concepts of which they have to internalize. They recognize further that children are not going to discover this world, its concepts and their relationships, merely by private inquiry. This enculturation involves decisions about curriculum objectives and content and about teaching methods. These decisions are not simple; they involve considerations of social need, cultural worth, human purposes, learning styles and capacities, educational theory, and economic necessities. Introducing children to the symbolic and practical world of science in a way that alienates them from this world, that confuses them, and that makes the scientific world completely unintelligible makes no sense on any account of teaching and education: Constructivists and nonconstructivists are agreed on this point. The problem for constructivists, especially of the radical

variety, is how, given their principles, to get children to believe, understand, and make meaningful, scientific ideas that not only transcend their experience but are often in outright contradiction with their experience.

Michael R. Matthews

See also Discovery Learning: Pros and Cons; Epistemologies, Teacher and Student; Knowledge, Analysis of; Piaget, Jean; Social Constructionism; Vygotsky, Lev

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RANCIÈRE, JACQUES

See Teaching, Concept and Models of

RATIONALITY AND ITS CULTIVATION

Over the millennia, a great many philosophers and educational theorists have asserted that what marks humans off from the rest of the animal kingdom is

the fact that we are *rational animals*. Along with this, many have also recognized that the rational propensities we evidently are all born with are not sufficient for the life we will (or should?) live as adults, which inexorably has led to the view that a fundamental aim of education is the fostering of this rationality. But of course, there are further complications: Dog owners everywhere will claim that their particular Fido is also a rational animal or, at the very least, that he certainly can think—the implications being, first, that we humans are not quite as special as we often like to suppose and, second, that thinking and rationality, if not identical, are at least very closely related. A skeptic will raise a further complication by pointing to the very many instances that occur of fallacious reasoning in everyday situations—the implication here being that in practice humans are only *imperfectly* rational animals. Thus, any account of rationality needs to be charitable in that it allows for the making of some mistakes—even high-functioning logicians sometimes make slips in reasoning!

But in a sense, these are quibbles; it seems incontrovertible that the fostering of rationality is desirable, and the task at hand is to settle on how it is to be characterized. It is to this task that the entry will turn.

Rationality: An Individual or Social Capacity?

First, it should be noted that there has been a tendency, among those who stress the role of education in fostering the development of the students' rationality, to treat it as an individual capacity; they follow the lead of Immanuel Kant in his famous essay "What Is Enlightenment?" (1784/1995): "Enlightenment is man's release from his self-incurred tutelage. Tutelage is man's inability to make use of his understanding without direction from another. . . . Have courage to use your own reason!" (p. 1). This raises a fundamental issue: Can rationality—or at least the exercise of this capacity—be as independent of social influences and resources as perhaps is implied here? Rodin's famous "The Thinker" epitomizes the Kantian ideal: He is in deep ratiocination, absolutely fixated on something not discernible to the naked eye; he is alone—no teachers or colleagues are present; he is physically immobile—no pacing, no experimenting; he is *sans* social resources (no pen, no paper, no journals, no computer, no Google)—*sans* even clothing. Why on earth should education try to foster this?

A contrasting conception was put forward in the early decades of the 20th century by the Russian developmental psychologist Lev Vygotsky; the key idea in this context was his well-known “zone of proximal development” (see the discussion in Phillips & Soltis, 2009, chap. 6). Vygotsky depicted the developing youngster—learning to think and reason adequately—as being surrounded by, and as being given educational assistance by, peers, parents, teachers, members of society at large, newspapers, magazines, textbooks, and other cultural artifacts. In other words, for Vygotsky, the development of rationality takes place in a *social context* or a zone. Indeed, from this social perspective, he criticized Jean Piaget for his tendency to conceive of the learner who was undergoing development (i.e., development of his or her cognitive “logical structures”) as a kind of solitary young scientist—or, as one might say, as a young version of Rodin’s “The Thinker.” One can even go further—Piaget thought of his developing youngsters as being rather like insect or mollusk lava, that pass through preordained stages without input or guidance from the adults of their species (it is not a coincidence here that Piaget received his doctorate not for a study of children but for a study of the mollusks of Valais).

The remainder of this entry will delve further into some of the difficult and vexing issues that have been sketched above, and some of their educational implications shall also be outlined.

How Is Rationality Characterized?

Three of the most prominent accounts of rationality in the literature of the past few decades can be summarized as (a) the logical reasoning account, (b) the metacognitive perspective account, and (c) the appropriately moved by reasons account. There may be some overlap between these, and they all have clear educational implications.

The Logical Reasoning Account

The logical reasoning account treats rationality as the capacity to engage in valid logical reasoning—the ability to draw logically warranted conclusions from premises presented in arguments, to avoid drawing fallacious inferences, and the like. As the philosopher Gilbert Ryle (1962/1972) put it in his essay “A Rational Animal,” “It is, I think, sometimes assumed that there is just one type of intellectual fault against which the thinker must have been trained and must now be wary, namely breach of the rules of logic” (p. 190). The restricted nature of this

view of rationality needs to be stressed; a logically valid conclusion is one that follows from the premises of the argument according to the laws of logic, regardless of whether or not these premises are true.

This “logical reasoning” account readily morphs into the view that, as Harvey Siegel (2003) has expressed it, a fundamental aim of education is to foster the student’s “ability to reason well” (p. 306), which in turn often becomes operationalized as the teaching (in some form or another) of critical thinking or argument analysis (p. 307; see also Feldman, 2009).

But, as Ryle and others have pointed out, there must be more to the story than this. To “reason well” will be construed by many as the ability to reach reliable or true conclusions, not merely ones that follow from the premises of a logically valid argument. And there are two requirements here: First (as noted above), the chain of reasoning certainly must be a valid one—the conclusion must logically follow from the premises; but second (and not nearly noted so often), the premises that appear in the valid chain of reasoning must be true, or at least reasonable ones if where the truth lies is not certain. To use an example that has sometimes served as a research tool, the following argument is logically valid (although many children up to about the age of 10 will have trouble acknowledging this, as will some adults—who eventually will mostly come around):

Elephants are animals or plants.

Elephants are not animals.

Therefore, elephants are plants.

The conclusion here is valid, for it follows logically from the premises; but one of the premises (the second!) is not true, so the conclusion is not true. So here is the conundrum: If an individual from our own culture accepts this valid argument and its incredible conclusion, would we say that he was irrational, that he was rational but seriously uninformed, or that he was logical but irrational? It is a difficult call to make, but many of us would hold a rational member of our own culture up to a higher standard than merely being able to reason validly (overlooking occasional slips); we would also expect this individual to be able to reject logically valid conclusions that were not true or that were even blatantly silly because at least one of the premises that had been used in the argument was untrue or even silly. In short, we expect a rational

person not only to be able to reason logically but also to be able to guide this reasoning using a background of knowledge.

But a much more difficult situation arises when the thinker whose rationality is being assessed is a member of a foreign or “exotic” culture—one in which there is a different knowledge base or in which a different conceptual apparatus holds sway (perhaps one that refers to concepts or entities about which—to use the words of the Bard—we have not dreamt of in our philosophy, and which cannot be adequately translated into our own terminology). In such a case, it might be difficult or even impossible to determine if the chain of reasoning (which makes no sense at all to us) is indeed logical, let alone rational. This is perhaps why early Western anthropologists “discovered” that members of exotic cultures had “primitive minds”; not being able to make sense of the reasoning patterns, and/or the premises and knowledge base of their indigenous informants, it was not difficult to judge them as having a lower form of mentation than those of us in the Western world. This view was supported by a crude application of evolutionary theory that depicted societies as falling into a linear developmental sequence—one that placed *our* society at the peak of development and *theirs* much lower down the scale. The so-called father of American anthropology in the early 20th century, Franz Boas, strongly opposed this view, and he argued that there was no fundamental difference in the “ways of thinking” of primitive and civilized humans, but he also stressed that all humans see the world through the conceptual lenses provided by their own culture (a variant of the doctrine sometimes labeled as cultural relativism), resulting in lines of thought that may be difficult for outsiders to comprehend.

This discussion should help illuminate the criticism that is sometimes offered to the effect that the concept of rationality as it has commonly been developed in philosophy of education suffers from cultural or gender bias. The stress on constructing logically valid chains of reasoning, and the relative neglect of the need for using true premises (and the role played by cultural background knowledge in identifying what members of a group—any group—regard as established knowledge), loads the “rationality dice” in favor of the dominant group in a society (in the West, usually White males) and puts members of ethnic minority groups at a disadvantage. An even more radical charge has been made by some feminist philosophers, who claimed that they also are victims of bias in the attribution of rationality, for a central

form of logical argumentation (the form technically known as *modus ponens*) is a “male patriarchal creation oppressive of women.” The well-known philosopher Martha Nussbaum replied to this accusation by showing that *modus ponens* was actually used several times in the arguments that the feminist philosophers mounted against it. (For discussion of this case, in which the to and fro became quite heated, see Phillips, 2000, chap. 11.) Mercifully, the thorny issues raised here cannot be pursued in depth in the context of this limited encyclopedia entry, although they will be revisited briefly later.

The Metacognitive Account

The metacognitive account, favored by some researchers in cognitive development but by others as well, holds that rationality involves not just the ability to make logically valid inferences, and to evaluate them, it also involves the ability to reflect on and control our inferential activities in order to ensure that they serve our larger purposes. Ryle (1962/1972) seemed to be flirting with this view when he wrote that the type of thinking that is involved in rationality “essentially embodies the element of self-correction. . . . The thinker cares, at least a little bit, whether he gets things right or wrong” (p. 192). The developmental psychologist David Moshman (2009) is more specific:

In addition to *awareness* and *evaluation* of inference, development is marked by increasing *executive control* of our inferences. To an increasing extent, we deliberately apply and coordinate our inferences to serve our purposes. . . . Rationality is thus fundamentally metacognitive in that it entails awareness, evaluation and control of inferential processes. (pp. 148–149)

From this perspective, if educators wish to foster rationality, they should operationalize in the classroom the principle that “metacognitive reflection and coordination” arise from social interactions, especially from interaction with peers (Moshman, 2009, pp. 156–157). Of course, the point made earlier applies here—to serve our purposes; to be useful and productive in real life, valid logical inferences also need to be informed by relevant *knowledge*.

The “Appropriately Moved by Reasons” Account

The “appropriately moved by reasons” account has been developed in detail by Siegel. It is a position

that rests on two fundamental claims: (1) a fundamental aim of education is to foster the ability of students to “reason well” (which involves constructing and evaluating reasons in various domains) and (2) education also needs to foster in students the disposition or inclination to act on the basis of these good reasons (Siegel, 1988, 2003). In the course of developing this position, Siegel acknowledges his debt to one of the founders of modern analytical philosophy of education, Israel Scheffler; the latter is quoted as having written that “rationality . . . is a matter of *reasons*, and to take it as a fundamental educational ideal is to make as pervasive as possible the free and critical quest for reasons, in all realms of study” (Scheffler, quoted in Siegel, 2003, p. 307). Siegel has been an active proponent of the teaching of “critical thinking,” which he views in a “broad” way as being normatively focused on the seeking of “good reasons” for acting.

Siegel is reluctant to wholeheartedly acknowledge that the knowledge component of good reasons is in a sense socially or culturally determined, for—quite reasonably—he wishes to avoid lapsing into relativism (see, e.g., his discussion of Feyerabend in Siegel, 2003). However, it does not seem to be relativistic to acknowledge that while what counts as established, warranted knowledge for a remote tribe in New Guinea will not pass muster in our own culture (where we judge it to be “false belief”), nevertheless it counts as knowledge for them, and the tribe members act on it in good faith as it were. While it is likely that *we* have sound reasons to regard their knowledge/beliefs as false—reasons that we might even regard as being objective—the important point is that this does not make *them* irrational for using these items, for probably *they* have good reasons—in their conceptual and epistemological schemes—for accepting them.

Finally, it is important to note Siegel’s powerful and effective answer to those who question the value of rationality as an educational ideal. He presents a type of transcendental argument (not unlike the one used by Nussbaum, alluded to earlier): If you argue that rationality is not a worthwhile aim, presumably you are attempting to present a valid argument—which shows that in practice you are committed to giving good reasons and logically valid arguments. In short, in your attempt to dethrone rationality, in fact you are displaying your commitment to it.

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See also Critical Thinking; Epistemology, Multicultural; Kant, Immanuel; Knowledge, Analysis of; Metacognition; Peters, R. S.; Scheffler, Israel; Vygotsky, Lev

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RAWLS, JOHN

John Rawls (1921–2002) was one of the most influential philosophers of the 20th century. Within the analytic tradition in political philosophy, he was arguably the most influential. His work has been translated into more than 20 languages and has shaped the debates in normative political philosophy since the 1970s. This entry will focus on two of his books, *A Theory of Justice* (1971) and *Political Liberalism* (1993), presenting the evolution of his philosophical views on social justice and their impact on debates about the role of education in the promotion of justice.

The Theory of Justice as Fairness

Rawls’s theory, as first formulated in *A Theory of Justice* (1971), discusses justice as a property of the set of major political, economic, and social

institutions of a society and examines the ways in which these institutions function together to distribute a number of important social goods. These goods, which Rawls calls “social primary goods,” include basic rights and liberties, opportunities to access desirable social positions, economic resources, and the social bases of self-respect. This focus on the set of major institutions means that Rawls is not attempting to offer a theory of justice that applies to all the things that can be called just or unjust, such as individual actions, particular laws, or forms of punishment. Rather he is only trying to specify the conditions under which the basic structure of society counts as just.

One strategy that Rawls uses to defend his account of social justice belongs to the contractualist tradition in political philosophy. Rawls designs a thought experiment in which hypothetical bargainers are placed together to select the principles that will guide the functioning of their society. He imagines rational individuals who are deprived of information about themselves such as their sex, age, race, social position, talents, psychological makeup, or views about the good life. In Rawls’s technical terms, contractors in this “original position” are behind a “veil of ignorance.” Rawls stipulates that such people are motivated to secure social primary goods for themselves and that they will agree to distribute them in accord with two principles: Rawls’s famous principles of justice. The fact that the bargainers are behind the veil of ignorance is meant to ensure that they will fairly consider the interests of all members of society—whether or not they belong to the majority religion, have marketable talents, were born into wealth, and so on. According to Rawls, the participants will be concerned with securing certain rights and liberties, because these may prove to be essential for the pursuit of various alternative plans of life. Under the conditions of uncertainty that characterize the original position, Rawls holds that they will agree to distribute economic resources according to a maximin rule. That is, they will try to ensure the best possible situation for the worst-off members of society, because that is who they themselves may turn out to be.

The first principle of justice, also known as the principle of liberty, says that each person is to have an equal set of basic rights and liberties, such as freedom of thought, freedom of association, rights associated with the rule of law, and rights to participate in the democratic process. The second principle of justice contains two subprinciples. It specifies that

social and economic inequalities are permissible only when (1) there is equality of opportunity for desirable jobs and positions and (2) any inequalities work for the benefit of everyone, including the least-advantaged members of society. Subprinciple (1) is known as the fair equality of opportunity principle, while subprinciple (2) is known as the difference principle. These principles can be used to guide the design of the constitution and to select laws and policies. They can also be used as critical standards to assess the level of justice of existing societies.

A second method Rawls uses to justify his principles of justice is called the method of reflective equilibrium. Briefly stated, the idea is that to assess high-level abstract principles of justice such as Rawls’s two principles, we should consider whether they cohere with particular judgments in which we have confidence: for example, that discrimination on the basis of religion or race is unjust, or that a just society should grant all its adult citizens the right to vote. If the principles do not yield our considered judgments, the method recommends either revising the principles or reconsidering the particular judgments. Ideally, after some iterations of this process, the revisions will lead us to a state of equilibrium between principles and judgments.

In his second book, *Political Liberalism* (1993), Rawls continues to argue for the same principles of justice that he had put forward earlier. What is new is that he tries to show that they can be defended by appealing to shared ideals present in the public culture of democratic societies and do not depend on more controversial moral, religious, or philosophical views that are not likely to be widely shared. One of his concerns is that society contains a number of quite different and reasonable views regarding the good life. Given this “fact of pluralism,” he tries to demonstrate that reasonable people with such different views can all agree on the same principles of justice and that this agreement can last over time. So he thinks that he has to show that there can be an overlapping consensus on his two principles, even though people are likely to endorse significantly different conceptions of the good life. Rawls also tries to show that when social institutions are effectively regulated by the principles of justice, each new generation will learn and endorse the principles and political values that support them. In this way, a just regime can be stable over time. This problem of stability over time is related to the question of how the principles of justice can be transmitted from one generation to the next and how they can become

freely endorsed as a result of processes that count in a broad sense as educational.

Rawls and Philosophy of Education

One educational topic that Rawls discusses in *A Theory of Justice* is the moral education of children—first in the family and later in schools and the wider society. Rawls aims to show that if children are raised in the context of reasonably just institutions, they will develop a sense of justice: a set of dispositions to comply with just arrangements. In the background of his argument is a plausible general story about the moral development of children, loosely based on the psychological theories of Jean Piaget and Lawrence Kohlberg. Rawls describes three general stages of moral development: (1) the morality of authority, (2) the morality of association, and (3) the morality of principle. At the first stage, it is feelings of love and trust that motivate compliance with the rules that parents give. At the second stage, feelings of friendship explain compliance with the rules of more complex schemes of cooperation, such as the rules of games and rules learned at school, which children see as working for the benefit of all the participants. The morality of principle is the highest stage, at which the motivation to comply with the rules of just institutions no longer requires the support of feelings of love or friendship toward those with whom we interact.

For Rawls, families are the first school of justice. But actual schools also play an important role in moral education, since they provide a more complex and diverse environment in which rules for fair cooperation with nonfamily members can be learned. In *Political Liberalism*, Rawls briefly describes some guidelines for the moral and civic education of children that should take place at schools. One issue that Rawls must deal with is that there are limitations on what the state can legitimately require schools to teach, given the fact of pluralism. Rawls argues that because the state cannot impose any comprehensive view of the good, the compulsory content of moral and civic education will be comparatively minimal. In particular, he claims that the state should require that children learn their constitutional and civil rights, that they acquire the knowledge and skills to become fully cooperative members of society, and that they develop certain virtues, such as fairness, toleration, and civility. The important point that Rawls wants to stress is that these kinds of requirements can all be justified in political terms. That is,

reasons can be offered in their support that avoid appeal to any particular comprehensive doctrine but, instead, rely on widely shared values present in the public culture. In this way, Rawls wants to make a contrast with the recommendations of comprehensive liberal forms of education, which directly aim to promote ideals of personal autonomy or individuality. As examples of liberal theories with commitments to comprehensive ideals, he mentions those of Immanuel Kant and John Stuart Mill.

One common criticism of Rawls's views on civic education, which he himself anticipated, is that the kind of education for which he offers a political justification will have virtually the same consequences as liberal comprehensive forms of education. For example, to teach toleration, it will be necessary to make children aware of the existence of other reasonable ways of living, so that they understand that people who do not follow the doctrines of their parents are not necessarily evil or corrupt. This may encourage students to reflect on the values they were taught at home and possibly to revise or reject them. Rawls admits that in practice the two forms of civic education may end up being difficult to distinguish, but he claims that any reasonable citizen must be willing to accept the risks involved in exposing their children to other reasonable views. Many critics of Rawls argue that his political defense of civic education therefore fails on its own terms. But some authors are persuaded by Rawls's general strategy and stress the need for political arguments in favor of policies as a way of expressing respect for fellow citizens by appealing only to reasons that they could accept as relevant.

Beyond families and schools, Rawls also claims that public institutions have a wide educational role, transmitting core political values and ideals—for example, that citizens should be treated as free and equal. In Rawls's view, when the political and legal institutions embody the principles of justice, the functioning of these institutions will teach people to appreciate those principles. Through acquaintance with these institutions, participation in political debates, or learning about the arguments and decisions of courts, citizens will acquire a better appreciation and understanding of the principles. It is perhaps because Rawls has faith in the educational power of public institutions that he presents the requirements on families and schools as relatively minimal. However, even if we accept Rawls's interpretation of the core values that inform the design of public institutions, we should admit

that these values tend to be imperfectly realized and that the messages they transmit are mixed. It is true that Rawls's argument is predicated on the assumption that social institutions are relatively just. But if one removes his idealizing assumptions and considers real-life circumstances, one could argue that the contribution of schools to the promotion of social justice is more significant and their tasks are more demanding.

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See also Autonomy; Citizenship and Civic Education; Kant, Immanuel; Liberalism; Mill, John Stuart; Moral Development; Lawrence Kohlberg and Carol Gilligan; Piaget, Jean

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RECAPITULATION, THEORY OF

The theory of recapitulation asserts that the development of the individual retraces the development of the human race; it is the theory that the stages of psychological development of the individual correspond with the stages of sociological development—in other words, that individuals pass through the same linear stages as those through which cultures have passed. This theory made a pervasive impact on educational theory and curriculum between 1890 and 1920, and traces of the theory can be found decades later. This entry briefly traces the rise and fall of the theory of recapitulation, describes some of the ways in which the theory was applied to curriculum design, and identifies some of its long-term effects.

In a broad sense, the idea that individual development retraces the development of the human race has deep roots in the Western idea of “the great chain of being,” going all the way back to Plato and Aristotle. However, in the 19th century, Charles Darwin’s theory of evolution inspired many biologists and social scientists to discover an empirical basis for the theory. In 1866, the German biologist Ernst Haeckel espoused the theory (which he called the “biogenetic law”) in its most potent form by coining the phrase *ontogeny recapitulates phylogeny*. Haeckel’s version of the theory reflected his belief that the development of the human embryo (ontogeny) displayed biological evidence of earlier stages in the evolutionary history of the human species (phylogeny), for example, the brief appearance of embryonic gills during the “fish stage” of development. However, few scholars subscribed to Haeckel’s literal and biological interpretation of the theory. Instead, leading scholars in anthropology, history, sociology, psychology, and education believed in the theory in a broader, almost metaphorical sense. Accordingly, virtually every notable social scientist during the late nineteenth and early 20th century (i.e., Herbert Spencer, Lester Frank Ward, etc.) made commonsense references to the correspondence between the psychology of the child and the psychology of adults in the “savage” stage of sociological development.

In education, the theory of recapitulation was most popular in the 1890s. The greatest proponents of the theory of recapitulation were the psychologist G. Stanley Hall and the American followers of the German educator, Johann F. Herbart, known as Herbartians. In the educational literature, scholars also referred to the theory of recapitulation as “genetic psychology,” “the historical method,” “the culture-epoch theory,” or the “theory of correspondence.” Advocates for the application of the theory of recapitulation drew on the child study movement, in which children were systematically observed for insight into the development of the adult mind and the development of the human race. Accordingly, the theory of recapitulation provided a conceptual framework for the organization of the elementary curriculum. Some, like the Herbartians, assigned specific content such as the poem “Hiawatha” and the novel *Robinson Crusoe* to young students because they believed that these works, which described the life of hunter-gatherers, corresponded with the “savage” stage of psychological/sociological development in which children were believed to be. Other educators, such as the genetic psychologist

Charles Judd, suggested the study of prehistoric man or Native American groups because he believed that young students had inherited an instinctual interest in these “primitive” groups. John Dewey, at his famous laboratory school at the University of Chicago, had young students trace the processes, rather than the products, of early humans such as making spears and building huts because he believed students learned best when they collectively relived the history of the human race. Overall, early progressive educators accepted that there was some biological basis for the child’s interest in “primitive” and “savage” activities and that the curriculum should in some way capitalize on these instincts.

The theory of recapitulation fell out of favor by the 1920s for several reasons. First, the theory was inherently ethnocentric because it pointed to Western culture as the culmination of all of human progress. In particular, the theory of recapitulation depicted non-White cultures as earlier steps toward the West on a linear scale of human development that included the universal stages of savagery, barbarianism, and civilization. The African American scholar W. E. B. Du Bois and the anthropologist Franz Boas presented evidence to the contrary, and they attacked the theory of recapitulation for its ethnocentric and racist implications. Second, the rediscovery of Mendelian genetics in 1900 problematized many of the biological assumptions on which the theory was based. Specifically, Mendelian genetics overturned the doctrine of the transmission of acquired characteristics (known as *neo-Lamarckianism*), which was a major component of the theory. Third, the rise of the behavioral psychology of Edward L. Thorndike and John B. Watson deflected attention away from instinct theory and genetic psychology and refocused the field on the significance of immediate reinforcements in the environment. Finally, the growing prestige of the disciplines of sociology and anthropology provided evidence for the significance of culture on human development. These emerging fields adopted a more interactionist, as opposed to a biologically deterministic, paradigm. As a result, social scientists adopted a more presentist and a less historicist outlook on human development.

Although scholars abandoned the literal application of the theory of recapitulation to education by the 1920s, many of the core ideas remained. For example, the belief in the social deficiency of non-White cultures such as African Americans and Native Americans continued until the 1960s and

beyond. In addition, the application of genetic psychology and stage theory to curriculum—most notably the research of Jean Piaget—remained, although these stage theories have largely been stripped of their sociological correspondence. The teaching of Native American culture in the K–3 curriculum and the expanding environments/horizons approach to elementary social studies (i.e., me, my family, my neighborhood, and my state history) can also, to some degree, trace their historical roots to the theory of recapitulation.

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See also Behaviorism; Dewey, John; Evolution and Educational Psychology; Herbart, Johann F.; Piaget, Jean; Progressive Education and Its Critics; Spencer, Herbert

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REFLECTIVE PRACTICE: DONALD SCHÖN

Donald Alan Schön (1930–1997), known in the field of education for his ideas about reflective practice, received degrees in philosophy from Yale University (BA, 1951) and Harvard University (MA and PhD, 1955). He taught at the University of California at Los Angeles and the University of Kansas City, and then, he joined the industrial research firm Arthur D. Little, Inc. After serving as the director of the Institute for Applied Technology in the National Bureau of Standards from 1963 to 1966, he cofounded and directed the Organization for Social and Technological Innovation. Schön was also a musician; he learned the clarinet in France at the Conservatoire National Supérieur de Musique et de Danse de Paris and played both the piano and the clarinet in jazz and chamber ensembles. After serving as a visiting

professor at the Massachusetts Institute of Technology for four years, he joined the faculty in 1972.

Schön's (1954) dissertation examined the nature of practical decision making, drawing in part from John Dewey's theory of inquiry. He argued that practical reasoning is inherently an empirical enterprise, one that is based less on principles and more on discovering efficient methods of arriving at a solution to a practical problem. Early on, his work focused primarily on individuals making decisions regarding personal or professional courses of action. From here, he began to develop an epistemology of practice (Schön, 1983, 1987) that drew serious attention to the nature of technical rationality and its influence on understandings of practice.

Drawing on a positivistic view of technical rationality, practice was often viewed as a process of problem solving that ignored context. Schön argued that a problem was not presented to the professional as "a given" rather than the setting and situation (context) mattered. He further argued that the technical rational model could not account for professional competence in divergent situations. He presented case studies in which artistic and/or intuitive processes were apparent as practitioners responded to situations of uncertainty, conflict, instability, or curiosity. Practical knowledge, therefore, consisted of the often tacit knowing inherent in the intelligent actions taken in response to such situations. Professional knowledge is less a set of rule-governed procedures and more dependent on the knowledge in action of professionals that is observable in how they respond to problematic situations. The ways in which Schön described the development of reflection as being embedded in an ability to frame a problem, and to then reframe a problem, led to meaningful applications of his views of reflection being integrated into the teaching of reflection in many professions. His work began to influence many fields such as urban planning, organizational-learning theory, architecture, social work, and education.

Schön's ideas were particularly attractive to those involved in the teacher education profession because, through his conceptualization of reflection, practice could be elevated to a higher plane, creating new ways for teaching to be understood and valued. It resonated well with the empirical studies of teacher thinking and decision making (Richardson, 1990), and as a consequence, his work was a catalyst for those concerned with researching practice to push the boundaries of ways in which it could be studied, presented, and portrayed. Teacher educators used

his work as a new way of drawing attention to, and illustrating, the complexity and sophistication of the knowledge of teaching and learning to teach. For many educators, reflection-on and reflection-in practice became a way of thinking about, and researching, their own expertise and knowledge. As a result, researching one's own practice became more acceptable (particularly in relation to scholarly publications) and was one reason why self-study of teacher education practices (S-STEP) emerged as a field of endeavor (see the *International Handbook of Self-Study of Teaching and Teacher Education Practices*, Loughran, Hamilton, LaBoskey, & Russell, 2004).

Schön was also interested in the nature of systemic change, organizational change, and the nature of professional practice within changing environments. In *Beyond the Stable State* (1971), he argued that institutions and systems are inherently conservative, seeking to preserve current values and practices. At the same time, the context and the tools for producing goods and services are always changing due, in part, to technological innovations. Because institutions and systems are learning systems, they attend to changes, but they do not, themselves, change unless there is a shift in values, a new idea becomes prominent and persuasive, or there is a crisis. Change, therefore, is not a rational process. Furthermore, as change occurs, there exists a period of instability within and among interactive systems in which surprises are a certainty and uncertainty is the norm.

He continued explicating the interrelationships among systems, uncertainty, and the nature of practice in his collaborations with Chris Argyris, also a professor at the Massachusetts Institute of Technology. In the preface to *Theory in Practice: Increasing Professional Effectiveness*, Argyris and Schön (1975) credit the impetus for writing the book to an invitation to work with educational administrative trainees. In the field of educational administration, Schön's work has been influential with regard to organizational learning and organizational theory (Argyris & Schön, 1978). Recently, however, Argyris and Schön have been cited in relation to capacity building and learning organizations. Thus, his work seems to have had a direct impact on teacher education and a somewhat indirect impact on the preparation of administrators.

Across the literature on reflection, Schön's work stands out as a highlight that arose 50 years after Dewey's (1933) *How We Think* placed reflection at the forefront of thinking about the sophisticated

nature of practice. Until that point, many scholars were attracted to the notion of reflection, but they did not fundamentally challenge or extend Dewey's work in ways that had as much impact as that of Schön. His focus on reflection created enormous appeal across the professions and ushered in an era of research through which the knowledge that underpins practice became more visible, meaningful, and valued.

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See also Dewey, John; Teaching, Concept and Models of; Theories of Action

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RELIGIOUS EDUCATION AND SPIRITUALITY

The spiritual lives of children and adults are considered of utmost importance in education in many cultures. Psychiatrist Robert Coles noted in his travels that children throughout the world often expressed concern about matters spiritual. Yet when it comes to public schooling in countries such as the United States, spirituality is seldom discussed in official discourse. Public schools and universities (and many private educational institutions) are expected to focus on what is directly important to the purposes of the secular aspects of life. In mass societies, the religious aspects of education are often left to the family and religious communities, rather than to the common schools, which are required to emphasize those aspects of living that are considered essential to all youth, regardless of sectarian religious preferences; in multicultural societies, emphasis on matters related to religion can be highly divisive.

Nevertheless, the spiritual lives of youth and adults have been the major focus of many educators throughout time. An example is the legacy of educator-philosopher Rudolf Steiner, who designed a school for the workers of the Waldorf Cigarette Company. Waldorf schools have spread to many parts of the world, and in addition, retreats, such as ashrams and monasteries, some founded in ancient times, continue to serve the spiritual needs of devotees of a religious tradition; the spiritual is an important part of cultural transmission in the survival of cultures. John Dewey, who has greatly influenced world thinking about formal schooling and its relationship to democracy, recognized that all human beings have a religious component to experience, but questioned the claims often made about how matters spiritual are specifically linked to the doctrinal truths claimed by particular religious sects or institutions, including the existence of the

supernatural. Matters spiritual were relevant only when they were part of the pragmatic and continuing project of furthering the well-being of mankind, which was possible to sciences based on experience, he thought. His naturalistic secular humanism has met with criticism from many religious leaders.

Spiritual matters are often associated with religious creeds, which vary from one group to another; even within a particular doctrine, there may be sectarian differences. Yet spirituality common to all faiths is based in a mystical sense of a personal relationship to an entity larger than one's self. Because this ontological sense is based in the universe of relations, it is not material and often thus difficult to prove through a science based on substance and matter. One of the best modern statements of the fundamental relational basis of spirituality comes from Martin Buber, whose book *I and Thou* emphasized the fundamental, existential relation that arises from the ontology of being; the awareness of being itself awakens persons to the dialogic relation to other beings that include not only persons, but also other individual organisms.

The awareness of the holistic presence of other beings also extends to the mysterious and "eternal thou," which is defined as "God" in the religions that historically emerged from Judaism—including Islam and Christianity, and in other religious traditions that include Buddhism, Hinduism, Confucianism, Taoism, and the many forms of indigenous religions. Relations are difficult to describe because description tends to favor the tendency to convert relations into things, into what Buber calls the relation of I-It.

The arts, including poetry, music, dance, painting, sculpture, and architecture, seem best suited to express spiritual relations. Zen Buddhists have traditionally emphasized the limitations of words, whereas Buber himself lapsed into poetry to express the spiritual in relations. The ancient Pythagorians perceived the religious aspects in mathematical numbers, which was important to their view of education. The philosopher of education Maxine Greene has advocated the need for teachers and pupils to perceive the world through the aesthetic imagination, a view that has a connection with spirituality.

Contemporary Thought

In more recent times, the idea of relations has become fundamental in the naturalistic, biological science of ecology, and the connections between living organisms that sustain the complexity of life

have become a basis for the spiritual that is also found in many indigenous religions that were once considered superstitious. The Norwegian philosopher Arne Naess is considered the founder of "deep ecology"—a spirituality that he believes humans sense in their individual and communal relationship to the larger ecosystem. Naess, like many others in the environmental movement, was influenced by Rachel Carson's *Silent Spring*, which was widely read in the 1960s.

During the last few decades, however, philosophers of education have been somewhat skeptical when discussing spirituality and religious education. There has been no controversy concerning teaching *about* religion and spirituality; after all, religious worship and religious belief are prominent features of human societies and are as worthy of study as are other major human phenomena; and religious and spiritual experience have been fascinating phenomena down through the ages that have engendered a fascinating literature (see, for a classic work, William James, 1902/1960). But philosophers often have been dubious about teaching religions with the aim of achieving *belief*, for this is seen to be in conflict with fundamental aims of education such as the development of critical rationality and the fostering of the autonomy of students—and there are some who regard this type of religious education as being paramount to indoctrination (Alexander & McLaughlin, 2003; Hobson & Edwards, 1999; Moran, 2003).

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Note: This entry is adapted from Kobayashi, V. N. (2009).

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See also Buber, Martin; Maritain, Jacques; Aquinas and Thomism; Augustine; Autonomy; Indoctrination; James, William.

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RELIGIOUS SYMBOLS AND CLOTHING

The question of whether individuals should be permitted to wear religious dress and symbols on public school grounds has garnered a great deal of attention from political and educational theorists in recent years. It is a question that raises a host of thorny philosophical issues—about the rights of cultural minorities in free and diverse societies, about the plausibility of state neutrality with regard to different conceptions of the good, about the scope of parents' rights in the educational realm, about children's prospective interest in personal autonomy, about the civic purposes of schooling, and so on.

Whether large or small, or “conspicuous” or discreet, religious symbols and clothing can be found in a variety of settings (public and private) in liberal pluralist societies. Perhaps nowhere, however, has their presence met with greater opposition than in the public schools. Sikh turbans and ceremonial daggers, Jewish skullcaps and stars of David, Muslim robes and headscarves, Christian crosses and purity rings—all of these are examples of ornaments and articles of dress, imbued with religious significance, whose appearance on school grounds has ignited public controversies from Canada, to Turkey, to Australia, to places in between. A number of these controversies have piqued the interest of philosophers, but none more so than the long-simmering

dispute over the *hijab* (the traditional Muslim headscarf) in France.

What is now known as *l'affaire du foulard* (“the headscarf affair”) began in 1989 in the Paris suburb of Creil when three Muslim adolescent girls were expelled from school for wearing the *hijab*. This initial incident sparked a nationwide debate about the uneasy relationship between cultural and religious diversity and the civic republican tradition in France. Many viewed the decision to expel the students as draconian and oppressive and as a troublesome reminder of the ongoing marginalization of the Muslim community in French society. Others regarded the decision as largely in keeping with the constitutional principle of *laïcité*—which roughly translated means “secularism”—and with the long-standing vision of the school as an indispensable instrument for republican nation building in France. In response to the incident in Creil, France's highest administrative court, the Conseil d'État, ruled that the wearing of religious clothing in public schools is not necessarily inconsistent with the principle of *laïcité* and that students should be allowed to wear such clothing under certain conditions (i.e., as long as it does not constitute an act of intimidation or proselytism; does not jeopardize the health, safety, or freedom of any member of the school community; and does not disrupt the educational process or otherwise disturb order). This ruling left a good deal of room for interpretation by local authorities, and predictably, many more controversies involving the *hijab* have cropped up in the years since. Nationwide, by 2003, upward of 2,000 Muslim girls were said to be coming to school dressed in the *hijab*, where more often than not they were instructed to remove it under threat of expulsion. In December 2003, a commission appointed by President Jacques Chirac recommended that “conspicuous” religious symbols, including Muslim headscarves, Jewish yarmulkes, Sikh turbans, and large Christian crosses, be banned outright in the public schools. (The commission opined that discreet religious symbols—e.g., small pendants in the shape of a cross, Star of David, or Fatima's hands—should be permitted.) Within a few months, France's national legislature had overwhelmingly approved a bill based on the commission's recommendations, which Chirac subsequently signed into law. In spite of worldwide opposition and threats from various terrorist organizations, the ban took effect on September 2, 2004, the first day of the new school year in France.

In the public school setting in any liberal pluralist society, religious symbols may take on a host of very different meanings, which is part of what can make the wearing of such symbols so contentious. The *hijab* is a case in point. For many of those who wear it, the *hijab* has deep personal and religious significance: It is an expression of their self-identity as Muslims, their devotion to Allah, and their commitment to Islamic tradition. In some situations, the *hijab* takes on distinctly political overtones—as when individuals who typically go unveiled in public begin to wear the headscarf to protest policies they regard as unjust (e.g., the French ban on conspicuous religious symbols) and to express solidarity with the Muslim community. For those who believe it has no place in the public school, as the majority of French citizens apparently do, the headscarf may signify an intolerable assertion of difference in an institution whose purpose, among other things, is to promote civic unity and loyalty to the republic. For some in this same camp, it may further represent the rise of a dangerous Islamist ideology that is deeply illiberal and antidemocratic. To make matters more complex, parties on both sides of the debate in France suggest that the headscarf sends particular, albeit very different, messages about the status of women in the Muslim community. Some proponents of the ban on conspicuous religious symbols view the *hijab* as an unmistakable signifier of female subjugation. Its very purpose, they suggest, is to keep women and girls hidden and submissive. Some opponents, on the other hand, regard the *hijab* as an emblem of female empowerment. From their standpoint, it serves to protect women's modesty, protest their sexual objectification, and indeed liberate them from the crass consumerism endemic to Western societies. What seems clear from all of this is that in the public school setting, religious symbols like the *hijab* are laden with ambiguity: What they actually symbolize very much depends on whose perspective is taken.

In accordance with their different theoretical orientations, philosophers are liable to bring different perspectives to bear on the question of whether students should be allowed to wear religious clothing and symbols in public schools. Proponents of group rights, for instance, will be more inclined than others to err on the side of leniency. From their standpoint, given the importance of promoting inclusivity and extending recognition and respect to cultural and religious minorities, policymakers and school officials will have good reason to condone visible markers of religious devotion and communal attachment

in the public school setting. Many liberals, however, will view the protection of individual rights, not group rights, as the paramount concern in debates such as this one. With this in mind, they may feel compelled to give serious consideration to a range of factors—such as the degree to which children are pressured or coerced into wearing religious attire and the messages the attire communicates about gender equality and women's rights—before taking a particular policy position.

Other philosophers may be disposed to favor a more permissive policy on the wearing of religious symbols in public schools out of respect for the interests of parents in raising their children in accordance with their own values, beliefs, and cultural commitments. Yet many liberal theorists of education will take issue with this line of thought. Parental interests, they will insist, must be considered alongside of others—including the independent, autonomy-related interests of children and the civic interests of the democratic state—before arriving at any decision on this exceptionally thorny matter.

Whether a permissive policy adequately respects children's prospective interest in personal autonomy is very much open to debate. On the one hand, allowing young children from religious families to wear religious attire in the public schools might help fulfill those children's need for cultural coherence, which as a number of theorists acknowledge, is a prerequisite for the development and exercise of autonomous agency. On the other hand, allowing older children from religious families to do the same might be thought to contravene their prospective interest in personal autonomy, especially insofar as it undermines the effort to provide them with an educational experience that is discontinuous with their home experience. Of course, to add yet another wrinkle to an already intricate conundrum, a permissive policy may well serve to promote the autonomy of older children from secular families. When they encounter other students who are dressed in religious attire in the hallway, classroom, or cafeteria, it surely enhances the discontinuity between their home lives and their lives at school.

Which policy approach with regard to religious clothing and symbols best satisfies the civic aims of public schooling in a liberal democratic society? Some will insist (as many government authorities and school officials in France do) that prohibiting religious attire on public school grounds promotes civic unity—that it helps keep future citizens focused on what unites them as conationals rather than on

what differentiates them as members of different sociocultural communities. Yet there are grounds for rejecting this assertion. Prohibition will be viewed (perhaps justifiably) as discriminatory and oppressive by many and will contribute to their sense of alienation from and resentment toward the state. It may lead many religious parents to withdraw their children from the public schools, which is liable to be detrimental to the prospective autonomy of those students who have been withdrawn as well as those students who remain in the suddenly less diverse public school setting. Furthermore, banning religious dress in the public school would seem to deprive the entire school community of some very concrete examples of cultural and religious diversity—an understanding and appreciation of which is essential for the exercise of empathic and responsible citizenship in a liberal pluralist society.

Perhaps the conclusion to be drawn here is that the adoption of a blanket policy on the wearing of religious clothing and symbols in public schools is unwise. Across-the-board toleration may not be sensitive enough to the pressure and coercion that some children endure from those who insist they should wear such clothing. Blanket prohibition, on the other hand, seems likely to impose unequal burdens on already marginalized groups. Both policies, when implemented indiscriminately, run the additional risks of contravening the autonomy-related interests of children as well as the civic interests of the democratic state. Perhaps, then, addressing this issue on a case-by-case basis, after taking proper account of local circumstances and contingencies, is the better approach.

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See also Autonomy; Citizenship and Civic Education; Diversity; Identity and Identity Politics; Liberalism; Multicultural Citizenship; Multiculturalism; Religious Education and Spirituality; Rights: Children, Parents, and Community; Toleration

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REPRODUCTION THEORIES

In his masterpiece *Democracy and Education* (1916), John Dewey pointed out that due to the ineluctable facts of the death of its members and the birth of their replacements, all societies face the need to reproduce their cultures, structures, and institutions, and education is the main process by which this is accomplished. More recent scholars across many of the modern social sciences have been interested in the processes and forces by which societies reproduce what can be regarded as their positive features, but they have displayed special interest in the ways in which their economic inequalities and differences in political power and status are preserved and reproduced over the generations. It has appeared obvious to many—following in Dewey's footsteps—that education plays an important role in the generational persistence of inequality.

This entry first looks at functionalist explanations of how the educational system serves as a mechanism of social reproduction and at the critique expressed in conflict theories such as that of Karl Marx, who saw class conflict as the basic root of inequities in many social institutions including education. Turning to the evolution of reproduction theories in the 20th century, the entry examines their shared concern with the generational persistence of unequal educational opportunities, a concern that is discussed in terms of the characteristics of economic structures; the relations of domination based on class, race, and gender; and symbolic struggles related to culture, power, and ideology, especially in capitalistic societies.

The entry also focuses on the following themes: (a) the proliferation of competing forms of educational reproduction theory in the 1970s and 1980s, (b) the subsequent rethinking of reproduction theories in response to cultural and political shifts, and (c) the more recent revival of Pierre Bourdieu's non-Marxist, reflexive sociology and theory of cultural and educational reproduction.

Functionalist Theory

Functionalist or “consensus” sociological theory (from Émile Durkheim to Talcott Parsons's social system theory) was based on an organic analogy that viewed education as serving the functional

imperative of social order and, in general, the interests of society as a whole. According to functionalism, societies are like living organisms that need to sustain and reproduce themselves, and their structures and systems that fulfill vital functions are inter-related, like the organs in a living animal. As alluded to earlier, the educational system had the function of ensuring that members of a society had the knowledge and skills necessary to maintain and reproduce its social and economic institutions.

From this liberal perspective, educational expansion was part of a process of democratization that resulted in social mobility. In contrast, conflict theories that emerged as part of the revival of Marxist and neo-Weberian conflict sociologies in the late 1960s sought to reveal the broken promises of liberal reform.

Social Reproduction and Marxist Thought

Marx introduced the topic of *social reproduction* in passing to refer to the noneconomic preconditions of economic reproduction, starting with the social reproduction of labor power itself in institutions such as the family and education in a society's superstructure. The term *reproduction theory* is most closely associated with approaches—initially of neo-Marxist inspiration—that viewed education as part of a cultural superstructure that functioned to reproduce and maintain social structures and patterns of relations between classes in the interest of the dominant capitalist class.

The full implications of the neo-Marxist approach were not explored in depth until two independent theoretical innovations in the 1930s, though their reception was delayed until the late 1960s, largely because of World War II and its aftermath.

Antonio Gramsci

The Italian Marxist theorist Antonio Gramsci (1891–1937) developed a theory of cultural reproduction based on the concepts of hegemony and counter-hegemonic resistance. He viewed hegemony as a form of control in which intellectual and moral leadership made domination seem “natural” to the dominated. Cultural hegemony refers to an entire system of beliefs and values that was accepted, or consented to, by the working class even though it was an ideology that did not serve their interests but rather supported the power of the ruling class. Thus, capitalist social reproduction in civil society was based not only on coercion but also on consent.

Gramsci rejected the economic determinism of orthodox Marxism, arguing that even though class was a major factor in socialization, individuals had some choice in how they interacted with the educational system. He emphasized the role of human agency and creative human action in historical development and viewed culture as the mediator between structural inequality and individual agency. Gramsci believed that for the working class to challenge the hegemony of the capitalists, they would need to organize ideological alliances with other societal groups supportive of the interests of the working class—a counter-hegemony.

The Frankfurt School

Orthodox Marxist determinism was also rejected by the Frankfurt school, a group of “critical theorists” who initially worked within the framework of the Frankfurt Institute for Social Research after Max Horkheimer became its director in 1930. More pessimistic than Gramsci, early Frankfurt school critical theorists proposed a theory of culture industries whereby capitalism produced forms of popular culture that functioned to pacify the masses and encouraged them to adjust to the “humiliating conditions” of their lives. Led by Theodor Adorno and Herbert Marcuse, they argued that in the 20th century the mass media had become a new source of ideological reproduction that was reinforced by a positivist educational culture that reduced all research and knowledge to the model of the quantitative methodology of the natural sciences. As Marcuse famously suggested, the result was a “one-dimensional” society in which critique was no longer possible.

Theories of Reproduction in Education, 1970s to 1980s

The canonical texts that founded reproduction theory in education appeared in rapid succession from 1970 to 1977, a confusing process that was influentially clarified by a critical differentiation of three types by Henry Giroux in a journal article in 1983: (1) economic reproduction theories, (2) cultural reproduction theories, and (3) emergent state-hegemonic theories of resistance.

Economic Reproduction Theories

Louis Althusser

The French neo-Marxist philosopher Louis Althusser (1918–1990) proposed the first version

of economic reproductive theory that claimed to overcome economic determinism by recognizing the relative autonomy of the ideological superstructures, contrasting the “repressive state apparatus” that exerts physical control over individuals with the “ideological state apparatus” composed of institutions such as religion, education, and law. Since the economic sphere was still determinant “in the last instance,” however, Althusser’s ahistorical structuralist methodology was widely criticized for an explanatory functionalism that could neither account for the agency necessary for his theory of revolution nor provide guidance for empirical research. Though giving culture more autonomy than traditional Marxism, structuralist interpretations denied agency because social actors were viewed as ultimately mere puppets of controlling coercive and ideological structures. As an abstract, speculative theory based on new “Marxist” conceptions of science, structuralism did not encourage empirical and historical comparison of how particular societies actually organize reproduction processes.

Samuel Bowles and Herbert Gintis

Independently, the American economists Samuel Bowles and Herbert Gintis developed a more influential version of economic reproduction theory in *Schooling in Capitalist America* (1977). Drawing on a more traditional Marxist base-superstructure model, their empirical analysis of American education was based on a “correspondence principle” suggesting formal relations of interdependence between the economy and the classroom “hidden curriculum” that inculcated the docility and discipline appropriate for working-class jobs. “The division of labor in education,” they wrote, “as well as its structure of authority and reward, mirror those of the economy” (Au & Apple, 2009, p. 84). Though Bowles and Gintis were also criticized for a mechanistic economic determinism, they later clarified their position by emphasizing contradictions and radical democracy. In periods of crisis, the functional correspondence between education and work could weaken (e.g., as evident in unemployment, the lack of jobs appropriate for given educational qualifications, or increased awareness of racial and gender discrimination). Revealing such contradictions in turn potentially contributes to large-scale democratic mobilization to contest the role of education and other institutions in the reproduction of inequality.

Cultural Reproduction Theories

Pierre Bourdieu

The origin of cultural reproduction theories is associated primarily with the French sociologist Pierre Bourdieu (1930–2002), especially his *Reproduction in Education, Society and Culture* (1970/1977) coauthored with Jean-Claude Passeron. Opposing Althusser’s structuralist Marxism, Bourdieu analyzed educational reproduction in terms of the contingent strategies of diverse class agents rather than conceiving of it as an automatic, even if relatively autonomous, functional outcome of production relations. Moreover, a Marxist binary class model was replaced, following the classical German sociologist Max Weber, by a relational and multidimensional one in which status competition was central. Whereas Marx’s analysis focused almost exclusively on the conflict between the owners of capital and the relatively unskilled labor power of manual workers, Weber pointed out the significance of other, emerging class positions, especially the middle classes who, as owners of educational credentials and cultural capital, could use their professional status to justify work autonomy and higher salaries.

Among the central concepts in Bourdieu’s theory of cultural reproduction were habitus, cultural capital, fields, the cultural arbitrary, and symbolic violence. The habitus, formed in the family household within the context of a system of class relations, is the enduring, internalized, and embodied disposition of agents and the source of the cultural capital that increases the probability of success within the field of education. Schools in turn exert symbolic violence by imposing a “cultural arbitrary” in the sense that the content of much of the curriculum reflected the imposition of the cultural tastes and ideology of dominant groups rather than having any relation to either the skills required by the economy or the cultural interests of subordinated classes. The classifications of the cultural arbitrary cause agents to “misrecognize” that apparently legitimate culture is actually part of a dominant culture that contributes to the social reproduction of the class system. Also associated with cultural reproduction theory is the British sociologist Basil Bernstein’s (1924–2000) sociolinguistic analysis of restricted and elaborated codes, which, though initially developed independently, provided a theory of transmission that complemented Bourdieu’s approach. Influenced by Bourdieu, the neo-Weberian conflict theorist Randall Collins developed in his *The Credential Society*

(1979) a powerful analysis of educational expansion as part of a process of credential inflation that had more to do with status group competition for jobs than with technical skill. The reception of Bourdieu's approach in education from the 1970s into the 1990s, however, was limited, focusing on cultural capital as a predictor of educational outcomes and largely without reference to his subsequent publications. Furthermore, Bourdieu's cultural reproduction theory also became the target of emerging theories of resistance that criticized the structuralism of both economic and cultural reproduction theories and their failure to provide an adequate understanding of agency and resistance.

State-Hegemonic Reproduction Theories

State-hegemonic reproductive theories strongly influenced by Gramsci emerged in the wake of the publication in England of Paul Willis's ethnographic study, *Learning to Labor: How Working Class Kids Get Working Class Jobs* (1977). The book became widely acknowledged as a turning point in reproduction theory—and an implicit refutation of Bourdieu—because of its ethnographic integration of a structural theory of reproduction with a more phenomenological, agent-oriented study of resistance on the part of English working-class male adolescents. Such resistance primarily took the form of negative reactions to schools and the learning of intellectual skills, a self-destructive process that contributed to both the lowering of expectations in working-class schools and a fatalistic sense of being destined for manual working-class jobs. Even though the resistance characteristic of the adolescent males studied by Willis largely served to ensure poor academic performance that led to working-class jobs, his analysis opened the door to more political interpretations. Henry Giroux's *Theory and Resistance in Education* (1983) provided an influential synthesis, incorporating gender and race in a critique of class reductionism that envisioned a critical theory of schooling in the United States based on a utopian “language of possibility” inspired by Paulo Freire's critical pedagogy. Michael Apple, as part of rethinking his earlier economic Marxist, class-based perspective, also converged on a similar position grounded in a theory of counter-hegemonic popular movements and democratic struggles. Critics questioned, however, the hope placed by resistance theories on the potential of education to transform society.

More Recent Debates: Post-1980s

Several historical developments contributed to the subsequent partial waning and rethinking of reproduction theories in education: the further discrediting of Marxism following the collapse of the Soviet bloc; postmodernist critiques of the metanarratives of universalizing theory; the rise of neoliberal ideologies, which became the new polemical target of educational reproduction theories; and the success of neoliberal policies in generally stalemating the advance of the radical democratic and populist visions of transformative resistance. Nevertheless, all of the earlier approaches continued to have adherents and, though originating in research published in French and English, have now influenced educational research traditions worldwide. In the English-speaking world, however, state-hegemonic resistance theories based on the relative equivalence of class, race, and gender (now often interpreted as relations of “intersectionality”) have remained the most influential, as evident in the writings of Apple and his diverse collaborators. The continuing development of resistance theories arose from constructively responding to the challenges of postmodernism, as well as incorporating critiques of class reductionism developed in feminist and race theories influenced by critical social theory and poststructuralist theories of identity and difference, including the use of Michel Foucault's theory of power and knowledge to understand aspects of reproductive processes, especially the marginalization of the perspectives and knowledge of subordinated groups. State-hegemonic theories have also responded to globalization by addressing transnational social reproduction in comparative analysis of the varieties of capitalism not only within but also outside the West. Nevertheless, some have continued to defend Marxist economic reproductive approaches and the primacy of the capital relation, rejecting theories that abandoned revolutionary Marxism by conceding too much to postmodernism, multiculturalism, and identity politics. Another significant development has been a remarkable revival of interest in the work of Bourdieu.

Future Directions: Bourdieu's Legacy

A new interdisciplinary reception of Bourdieu emerged in the late 1990s and accelerated in the decade after his death. By 2007, he had become the second most cited academic author in the world, just behind Foucault and somewhat ahead of Jacques Derrida

(Thomson Reuters Web of Knowledge). A central concern has been locating the development of his work in relation to his own sociologically interpreted autobiographical reflections: early years in provincial southwestern France; elite training in philosophy in Paris, followed by a turn to structuralist anthropology and fieldwork in Algeria (recently recognized as the source of a “postcolonial Bourdieu”); a break with structuralism in the late 1960s—evident in a turn to a reflexive sociology based on synthesizing the work of Marx, Weber, and Durkheim—and the formation of a sociological research group in Paris; election to a chair in sociology at the Collège de France in 1981; and a turn to political activism as a public intellectual in the 1990s until his death in 2002.

From this revised perspective, it is now clear that the earlier reliance of educational researchers on the 1970 book on reproduction, *Reproduction in Education, Society and Culture*, contributed to unfortunate misreadings. As Bourdieu himself noted, it was a “work of youth” that still had vestiges of structuralism, limitations that were reinforced by being read independently of the empirical research on which it was based, as well as both his reflexive sociology and the theory of cultural and educational reproduction, the foundations of which appeared in his *Outline of a Theory of Practice* (1972/1977) and his later work, which included two books on French elite higher education: *Homo Academicus* (1984/1988) and *The State Nobility* (1989/1996). Beyond his book on *Distinction* (1979/1984), a widely discussed sociology of artistic taste, later publications also included topics such as the logic of practice, cultural production (especially art and literature), masculine domination, social structures of the economy, the state and power, television, and a sociological autobiography.

Several issues can be singled out in relation to educational reproduction theory. As against his alleged structuralism, Bourdieu’s mature sociological position is now often characterized as a form of poststructuralism, or what he called “genetic structuralism” or “constructivist structuralism,” that gives primacy to “strategies” over structuralist “rules.” Furthermore, the resulting reflexive sociology is grounded in a radical historicist reflexivity and comparative methodology.

With respect to the frequent charge that he overgeneralized the case of French education, many now argue that he provided the reflexive tools necessary for the historicist translation and respecification necessary for comparative research. For example,

though earlier efforts to apply the concept of cultural capital drew rather literally on his French high-culture examples from the 1960s (e.g., museum attendance), more recent work has focused on the culturally specific expectations of different educational systems, drawing on both qualitative and quantitative comparative methods. As well, awareness of his later work has opened up a wide range of new educational topics.

Finally, despite earlier criticism that he neglected resistance, Bourdieu’s project was based on the assumption that critical sociology contributed to liberation by revealing misrecognition, suggesting greater affinities with state-hegemonic resistance theories than previously realized. Moreover, his turn to a critique of neoliberalism as a public intellectual in the 1990s implied recognition of a changed historical context, even though a posthumous compilation of texts relating to his activist interventions reveals the continuity of his concerns. Nevertheless, more recent discussions have raised questions about the consistency of his conception of practice, especially the tension between the relativism of the cultural arbitrary and his defense of scientific universalization and the autonomous “collective intellectual” in research. The claim that the curriculum—especially in the humanities—is arbitrary and ideological rather than having a universal meaning or economic function has the paradoxical effect of potentially legitimating neoliberal efforts to undermine university autonomy by reorienting higher education and research to focus primarily on the supposed needs of the economy. Particular attention has also been given to extending and revising his approach by clarifying the conditions under which habituses change—as in the case of Bourdieu’s own tormented “cleft habitus” as an ambivalent provincial outsider in Paris—and the implications for theories of social movements and the public sphere.

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See also Apple, Michael; Capital: Cultural, Symbolic, and Social; Code Theory: Basil Bernstein; Critical Theory; Equality of Educational Opportunity; Freire, Paulo: *Pedagogy of the Oppressed* and Critical Pedagogy; Hidden Curriculum; Marx, Karl; Social Class

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their inception more than 2,000 years ago. Even in the modern technological world, far removed from the ancient Roman society and its emphasis on oratory as the primary means of communication, the canons are often used as a way of teaching rhetoric, whether in verbal, written, or multimedia formats.

Rhetorica ad Herennium

It is unknown today precisely how the rhetorical canons were developed and by whom. However, it is clear that by the time that Cicero (106–43 BCE) was a student of rhetoric, the Roman system of rhetorical education was established, and the rhetorical canons were firmly recognized as an important part of the pedagogical tradition. The most complete treatise on the rhetorical canons that survived antiquity is the text of the *Rhetorica ad Herennium*, composed around 90 BCE. The document provides in-depth explanations of the five canons.

The author of the *Rhetorica ad Herennium* is unknown. Because the section on invention so closely resembles Cicero's *On Invention*, which was written when the statesman was a young man, it was believed for more than 1,000 years that Cicero was the author of *Rhetorica ad Herennium*. Today, scholars believe that the similarities simply exist because Cicero and the unknown author were likely contemporaries. They may not have known each other, but they would have both been students within the same system of rhetorical education.

The *Rhetorica ad Herennium* was not a novel or groundbreaking text at the time it was produced. It provided a summary of what was essentially common practice in Roman education. However, from a modern standpoint, because it provides the most complete picture of the rhetorical canons from ancient Roman education, it is one of the most important educational documents to survive from antiquity.

RHETORICAL CANONS

The Roman educational system emphasized five canons of rhetoric: (1) invention (*inventio*), (2) arrangement (*dispositio*), (3) style (*elocutio*), (4) memory (*memoria*), and (5) delivery (*pronuntiatio*). Together, these five elements of effective communication provide a guide for developing, as well as analyzing, rhetorical arguments. While devised for oratory, the canons were seen as applicable to any type of rhetoric, whether verbal or written, and they have remained influential in education since

The Canons

The five rhetorical canons can be separated for the sake of study, but they were meant to be used together for an orator to develop an effective rhetorical act. Each canon influences the others, and without giving consideration to all, the rest would be ineffective. Invention (*inventio*) references devising the subject of a speech and what one will say about it. Arrangement (*dispositio*) is the organization of one's thoughts, giving careful consideration to the order in which an argument is made. Style (*elocutio*)

asks orators to consider their words and sentences and whether to speak in a plain, persuasive, or grandiose manner. Memory (*memoria*) can be seen as memorization, as speakers must commit to memory not only the subject matter of their speech but also their intended arrangement and style. Memory refers to more than rote memorization, however, as orators were expected to be able to speak extemporaneously on a variety of subjects. Finally, delivery (*promuntiatio*) asked rhetors to consider their tone, inflection, and gestures.

Each canon was viewed as important to a communicative act. If an orator's speech was stylistically composed and beautifully delivered, it would still be ineffective if the speech was disorganized and difficult to follow. Likewise, a well-organized speech would be futile if delivered in a stilted monotone with no consideration of style and delivery. If an articulate and moving speaker did not know enough about the subject of his speech, lacking *memoria*, then the speech would seem empty and ineffectual.

While the *Rhetorica ad Herennium* presents the canons in a systematized and highly technical way, the canons have continued to be influential because of their adaptability. The concepts of invention, arrangement, style, memory, and delivery have been applied to writing for centuries and, more recently, to multimedia compositions. For example, invention applies to prewriting strategies one can undertake when composing an argument, as well as using writing as a means of discovery. Arrangement remains important, regardless of whether someone is giving a speech, writing an essay, or creating any number of multimedia projects, from designing a webpage to filming and editing a video. Style in writing can be considered in a similar way to how the Romans saw it, focusing on issues of language such as syntax and word choice, but it can also be viewed much more broadly, such as the consideration of design elements in multimedia documents. From a modern perspective, the delivery of a speech need not involve a consideration of enunciation and gesture. Instead, delivery can relate more to choosing the appropriate medium for creating one's communicative act and making rhetorical choices that will lead to the most effective delivery of an argument to an intended audience. Memory, from a modern perspective, does not simply address memorization but deals with metacognition and the interrelatedness of thinking and writing (or composing in multimedia). The canons were devised in a society that emphasized oratory, but their emphasis on rhetoric—and

not just spoken rhetoric—has made them influential throughout history, even in today's technologically advanced society that the ancient Romans would not have been able to conceive of.

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See also Aristotle; Augustine; Cicero; Plato; Quintilian; Socrates and Socratic Dialogue

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RIGHT TO AN EDUCATION

The right to an education is widely assumed and asserted, but often without specificity as to its nature, limits, grounds, and implications. What is a right to an education and what kind of right is it? On what basis can a right to education be legitimately asserted? Who has a right to an education and against whom may it be legitimately asserted? What is the content of this right as regards the kind, quality, and extent of education that may be legitimately claimed? Can this content be specified in absolute terms or only in the context of what others in the same society or wider human community receive? Does the content of the right to an education vary from person to person in accordance with personal characteristics? For example, if a child's native language is different from a society's dominant language and normal language of instruction, does that give rise to a right to bilingual instruction? Do specific physical or cognitive impairments give rise to a right to compensatory educational accommodations? How far does the right to an education extend to encompass other forms of enabling conditions being publicly provided, such as adequate nutrition, transportation, or protection from bodily harm?

Rights protect what a person is owed as a matter of justice. Is a child's right to education *inalienable*, or can it be *forfeited* through willful lack of cooperation in learning? Can its fulfillment by those who have a duty to provide education be *waived*, in whole or in part, by the child or a representative of the child? If a child has a right to a good general education that includes instruction in the sciences, and evolutionary biology in particular, does a parent acting on the child's behalf have the moral or legal power to waive the child's right to that education on religious grounds, vacating the public's duty to provide it? Can a child's right to an education ever be in conflict with another's right, and if so, which right has more weight?

Even when the right to an education is affirmed in authoritative public documents, such as the 1948 Universal Declaration of Human Rights and the 1989 Convention on the Rights of the Child, there may be neither uniformity of implementation nor philosophical closure on the parameters and justification of those rights. Article 26 of the Universal Declaration affirms a universal right to free and compulsory elementary education, yet more than 100 million of the world's children lack access to elementary schooling and 1 billion adults are illiterate, with girls and women constituting about two thirds of these totals. Educational theorists and philosophers widely endorse the existence of a right to a good education at public expense, but they ground the affirmation of this right in different rationales and disagree on many aspects of what the right entails.

This entry will focus on the fundamental question of what constitutes a right, what it means to have a right to an education, and the theories that can be used to justify educational rights claims. The forms, functions, and varieties of rights are distinguished to clarify the nature of a universal right to free and compulsory education. The entry then explains the ways in which status, consequentialist, and contractualist theories have been used to justify the right to an education.

What Is a Right to an Education?

Rights are commonly understood in terms of their *form* and *function*. Formally, they consist of some constellation of four elements: (1) *privilege*, (2) *claim*, (3) *power*, and (4) *immunity*. To have a *privilege* to do ϕ is to have no duty not to do ϕ . A *claim* asserts another's duty to do something for the benefit of, or

demanding by, the right holder: *A* has a claim that *B* do ϕ , just in case *B* has a duty to *A* to do ϕ . To have a *power* is to be able to alter some privilege or claim. *A* has an *immunity* when *B* lacks the ability to alter *A*'s privileges and claims. As regards *function*, moral and legal theorists have long disagreed as to whether it is in the nature of rights to protect the interests of rights holders (the interest theory) or to enable exercises of will or control (the will theory), and some have recently suggested hybrids of these functions or that rights have multiple functions.

There are also different kinds of rights: (a) *moral*, (b) *natural* (these being moral rights thought to arise from features of a being's nature), (c) *customary* (entailed by social conventions), (d) *legal*, and (e) *human* (moral rights asserted, or enacted, as international law, primarily to protect persons from abuses of state power).

What kind of a right is the right to education? The universal right to free and compulsory elementary education, affirmed by Article 26 of the Universal Declaration as a human and legal right, would be a constellation of privileges to take advantage of opportunities to learn; claim on others (one's parents, government, and to some extent the international community) to provide what is required for a suitable elementary education; immunity to others altering this privilege and claim and no power to waive, annul, or transfer the right (making it inalienable); and no privilege to not cooperate in learning opportunities others have a duty to provide (making the education compulsory).

Justifying Assertions of Right to an Education

Justifying the attribution or assignment of specific, well-defined rights is a further task for philosophical and jurisprudential argument and theory. The basic approaches divide into status theories that regard rights as entitlements arising from possession of specified attributes, consequentialist theories that justify assignments of rights as instrumentally valuable in promoting a suitable distribution of happiness or well-being, and contractual theories that defend rights as belonging to the fair terms of social cooperation that citizens or their representatives would find rational to agree to in circumstances ensuring impartiality.

In John Locke's (1632–1704) formulation of natural moral law, a child's status as a rational being caused to exist by parents gives the parents a duty to educate the child, and the right to education is

a claim against the parents' correlative to this duty. The education to which the child has a right revolves around the fulfillment of rational potential in independent sound judgment, adult self-sufficiency, and responsible citizenship. From such starting points, many have added that it is legitimate for governments to enforce this parental duty, and that there are public interests in children being educated (responsible citizenship, economic productivity, public health, etc.) that give governments reasons to in some way ensure that all children are educated. Such public interests do not in themselves entail a right to be educated in the ways that serve those interests, nor to be educated at public expense, however.

Immanuel Kant's (1724–1804) moral theory has both status and contractual elements. It holds that persons intuit their status as rational agents as entailing moral duties of respect for other rational agents. Some of these duties are specific ("perfect") in such a way as to give rise to correlative rights in others, while duties of mutual aid in knowing the truth, developing talents, and fulfilling legitimate ends are nonspecific ("imperfect") as to the time, quantity, and beneficiaries of the aid, and for this reason, they do not give rise to correlative rights. These aspects of the theory might lead to a view similar to Locke's, but Kant argues that persons who interact with one another have a moral duty to negotiate fair terms of cooperation that give specificity to their moral duties in a framework of common law. On this basis, it can be argued that there is good sense and efficiency in enacting into law a public system of schools through which everyone's nonspecific moral duties to aid one another in knowing the truth, developing talents, and fulfilling legitimate ends can be made specific and thus correlative to a right of education against the public and its government.

John Rawls's (1921–2002) influential theory of justice is a form of Kantian contractualism, and its basic constitutional principles entail a right to public provision of education suitable to creating fair equality of opportunity in the competition of citizens for desirable positions and offices. Other recent defenses of a right to education that seem to rest in hybrids of status and contractual approaches include Amy Gutmann's argument that rights of civic participation in a democracy entail a right to be publicly provided an education that enables one to participate "effectively," Martha Nussbaum's defense of a human right to be provided with the prerequisites for exercising diverse human capabilities well enough to live a life of "dignity," and

arguments that the authority of governments and law rest on acknowledgment of a citizen's right to public provision of autonomy-respecting forms of civic education.

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See also Equality of Educational Opportunity; Kant, Immanuel; Legal Decisions Affecting Education; Locke, John; Rawls, John; Rights: Children, Parents, and Community

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RIGHTS: CHILDREN, PARENTS, AND COMMUNITY

Theorists and advocates frequently use claims about rights to advance the moral and legal entitlements of individuals and groups. Because of the rhetorical force of rights claims—the philosopher Ronald Dworkin called them “political trumps”—they are especially prevalent but also controversial in the education realm. Education rights assert individuals' entitlements to particular resources (e.g., to adequate or equal school funding or to qualified teachers), and they also advance claims about educational governance (i.e., who should decide how children are educated or determine education policy more generally). Given their focus on distributive justice and educational authority, rights claims can bring three key groups of educational stakeholders into tension: (1) children, (2) parents, and (3) the state. This entry

first provides a brief overview of rights theory. It then describes some of the specific rights claims that may be advanced on behalf of or by children, parents, and the state; how those claims may conflict; and various responses to these conflicts. The entry concludes by pointing to several lingering issues that continue to engage philosophers of education.

Background on Rights Claims

Rights claims have significant moral and political force because of their unyielding nature. This makes them particularly useful in both theoretical arguments and advocacy efforts “on the ground.” But the uncompromising character of rights claims is also a liability since it opens rights to challenges about their feasibility and their democratic legitimacy. The advantages and challenges of advancing rights claims can be seen in the different types of rights that proponents may invoke and in objections to them.

Rights theorists often divide rights into three “generations.” First-generation rights, also known as negative or liberty rights, prevent the state from intruding into the private sphere of individuals’ lives (e.g., freedom of religion). In the education realm, these rights include parents’ freedom in the United States to educate their children in private rather than public schools or to homeschool their children. First-generation rights importantly safeguard aspects of parental authority over education from state interventions. But since they guarantee only noninterference, they do not provide a complete picture of the educational opportunities that the state or other parties positively owe children.

Second-generation rights, also known as welfare rights, focus on individuals’ positive entitlements to particular social goods and opportunities. Examples in the education realm include the right to a free elementary education enumerated in the Universal Declaration of Human Rights and, in the United States, the right of students with disabilities to a free and appropriate public education. The U.S. Constitution is notably silent on the matter of education, and the U.S. Supreme Court has ruled that there is no constitutional right to education. Despite the uncertain legal status of children’s rights in some contexts, advocates and theorists still press children’s rights to specific educational resources to highlight the moral importance of their claims. Although all rights, including liberty rights, require resources to realize, welfare rights are typically considered to be

more expensive and thus more controversial. Welfare rights are also the subject of heated debates since they are often grounded in ideas about distributive justice, which raise questions about the particular opportunities students are owed.

Finally, third-generation rights are group rights. Some rights are necessarily group rights because they require collective effort to realize and enjoy (e.g., clean air). Other rights are accorded to groups to protect their identity as such. In the education realm, multicultural theorists advocate group rights that recognize and respect the beliefs and practices of minority groups in public schools (e.g., linguistic minorities’ right to bilingual education or religious students’ right to accommodations in schools to enable the exercise of their beliefs). The political theorist Susan Moller Okin raised an important criticism of multicultural group rights from a feminist perspective: They may harm less powerful group members—like women and children—if they end up protecting patriarchal, sexist norms and practices. This concern has been central in debates about the ban on Muslim headscarves and other conspicuous religious symbols in French public schools.

Several other general criticisms of rights merit brief mention. Critics of rights across all three generations have argued that rights claims lack teeth, especially if they do not assign individuals correlative duties to bring them to fruition. Jeremy Bentham famously called rights “nonsense on stilts,” while contemporary critics highlight the chasm between moral and legal rights to point out the utopian character of many rights claims. Nonetheless, many advocates and theorists find rights discourse to be a powerful vocabulary with which to assert the entitlements of vulnerable citizens, like children.

Holders of Educational Rights: Children, Parents, and the State

Historically, children’s interests were considered synonymous with their parents’ interests and, by extension, those of the state; this view largely precluded the possibility of children having distinct rights to self-determination. At the other end of the spectrum, more contemporary and radical “child liberationists” have argued that children should be free from the paternalistic authority of both parents and the state and should enjoy all the rights that are granted to adults. This stance, by contrast, leaves little if any room for parents’ rights or consideration of the state’s interest in education. More plausible views of

the moral and political status of children fall between these extremes, as John Locke's theory exemplifies. Locke advanced the notion of parents' role as a fiduciary one, meaning that parents have only temporary authority over their children in recognition of their immature and vulnerable condition. With this authority comes the duty to cultivate children's independence, and once this goal is achieved, parents' fiduciary authority ends.

Locke's view importantly prioritizes the "other-regarding" component of parenthood by privileging children's interests rather than parents' rights *over* children. But determining which educational goals serve children's interests is a subject of intense debate. A related and especially controversial issue is what role parents' own desires for their children—the "self-regarding" component of parenting—should have in child rearing, given that these desires may conflict with children's and the state's interests. These and related tensions among the interests of children, parents, and the state are at the core of debates about educational rights. The following sections briefly describe some of the key interests of these three stakeholders and the possible tensions among them.

Children's Interests

Many liberal educational theorists argue that children are entitled to an education that cultivates autonomy. There is a spectrum of views regarding what such an education requires. On one end of the spectrum, some theorists argue that children are entitled to an "open future" in the most expansive sense, meaning that children should be able to make choices about their life's course from the widest variety and number of options. This view gives little weight to parents' self-regarding interest in child rearing and to the state's interest in educating children, instead privileging the idea that children's choices should be unlimited by others' interests.

On the other end of the spectrum, some theorists argue that children are not owed an open future by their parents or by the state, and that both parties may rightfully limit the options available to children. Theorists who privilege parents' rights argue that honoring children's right to an expansive, open future unduly curtails parents' ability to pass on to their children their religious, cultural, political, or other beliefs—an ability that is central to familial relations and that respects diversity. Relatedly, theorists who are focused on the state's interest in

children's education contest the open future ideal on the grounds that it jeopardizes state stability, because children must be taught to be law abiding (and some argue further, patriotic). The state interests, proponents of this view argue, cannot be met if children's political allegiance is a matter of choice among the widest variety and number of options.

A number of theorists view the open future ideal as an unattainable one since the families of children, and the political culture in which they are raised, inevitably shape children's beliefs. Recognition of this reality leads to a modified view of children's right to an education that cultivates autonomy. From this perspective, children are not entitled to the widest or greatest number of choices, but rather, they must have the capacity to reflect critically on, and then independently endorse or reject, their conception of the good. This understanding of education for autonomy prompts ongoing debates (discussed in the final section) about whether it biases children to reject rather than endorse the beliefs with which they were raised and so faces charges of being intolerant of ways of life that do not privilege autonomous choice.

Parents' Interests

As noted above, parents' interests in children's education entail both self-regarding and other-regarding components. Since parents' other-regarding interests are children's interests, this section focuses on the self-regarding aspects of parenting (with the disclaimer that in many cases parents do not see a division here: What they wish for their children is, as they see it, also in their children's best interest). Parents' "expressive interest" in child rearing includes their desire to educate their children in accordance with their vision of the good, be it through religious traditions, political views, or belief in the superiority of particular educational, career, or other life paths. One of the most frequently discussed cases by education philosophers about the scope of parents' rights is *Wisconsin v. Yoder* (1972), in which the U.S. Supreme Court granted Amish parents' request to exempt their children from compulsory education after eighth grade. Theorists have debated at length whether this decision was rightly decided out of deference to parents' expressive interests or whether it wrongly curtails children's autonomy.

Beyond concern about children's autonomy, some theorists argue for certain limits on parents' rights

due to concerns about inequalities among families. Egalitarian theorists highlight the educational advantages wealthy parents can confer on their children—advantages they see as especially troubling given the positional nature of education and the growing market of educational services one can buy (e.g., “elite” preschools, tutors for college entrance exams, etc.). Since the family into which children happen to be born is morally arbitrary, egalitarians argue, it is unjust to condone educational inequalities that follow from families’ varying resources. This view raises the difficult question of where to draw the line between morally justified and unjustified parental partiality.

The State’s Interests

The state’s interest in children’s education is focused on cultivating students’ civic skills and ability to be productive members of society, which leads to different conceptions of what civic education should entail. Theorists who privilege the state’s interest in education argue that the goal of maintaining political stability justifies an education designed to produce patriotic citizens, even if this means teaching students a whitewashed version of history. Critics of this view argue that it wrongly prioritizes the state’s interest in having loyal citizens over children’s right to an education that develops their autonomy—a capacity that some argue is central to democratic citizenship and the state’s legitimacy since individuals need to be able to make discerning, independent choices about public policy.

The *Yoder* decision further illustrates how the state’s interest in education may be in tension with children’s interests. Critics of *Yoder* point out that the Court’s decision to exempt Amish children from compulsory education past eighth grade rests in part on the recognition that the state does not need *all* of its citizens to receive a civic education that prepares them for democratic engagement. Rather, the state just needs a critical mass of citizens to receive this education. The state’s interest in education, then, cannot underwrite *all* children’s right to education and thus comes up short for children whose parents assert their expressive rights, as was the case in *Yoder*.

Ongoing Debates

Given the controversial nature of educational rights, very few are uncontested. The role of autonomy arguably is the issue that brings parents’, children’s,

and the states’ interests and related rights claims into greatest conflict. Of particular note is an ongoing debate about whether the cultivation and exercise of autonomy can be limited to the public sphere. If this is possible, then education for autonomy can enable individuals to exercise critical reasoning skills in their public role as citizens without influencing their conception of the good in the private sphere of their lives. If this division is not possible and autonomy is an all-encompassing capacity, then advocates of education for autonomy have to defend it against the criticism that it is biased against some ways of life and, by extension, may undercut some parents’ expressive interest in passing on their beliefs to their children.

Another important issue today is how to think about the role of parents and the state in realizing children’s rights in the face of institutional failure. Ian Shapiro argues that the state is responsible for meeting children’s basic interests (e.g., fundamental security, nutritional, and educational needs), while parents are responsible for their best interests (the resources and opportunities to realize children’s full potential). But as Shapiro highlights, this seemingly clean division of labor becomes especially difficult when public institutions fail to uphold their duties. Parents should act as backstops for the state in this situation, and in doing so, he argues, they should avoid actions that may benefit their own children but worsen conditions for other children. Acting on behalf of all children, however, might work against parents’ own children, in which case, Shapiro concedes, it is understandable for parents to privilege their children. This increasingly common situation in education—perhaps best exemplified by some parents’ decision to exit failing public schools—presents a significant challenge to the ideal theory about parents’, children’s, and the state’s educational rights and duties.

Anne Newman

See also Autonomy; Childhood, Concept of; Children’s Rights; Citizenship and Civic Education; Legal Decisions Affecting Education; Right to an Education

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ROGERS, CARL: FREEDOM TO LEARN

Carl Rogers (1902–1987) is often cited as being the father of modern client-centered therapy and humanistic psychology. Rogers (1940) stunned the psychological community in the early 1940s when he described the need for client-centered therapy, for from the time of Sigmund Freud, psychotherapy had been the domain of the therapist, cloaked in secrecy, and devoid of systematic research. In his acceptance speech for the Distinguished Professional Contribution Award in 1973 by the American Psychological Association, he reflected on his 46 years of efforts challenging psychologists to open psychotherapy "to public scrutiny and research investigation. I made possible the empirical study of highly subjective phenomena" (as cited in Evans, 1981, p. 123). Rogers found research and openness (transparency) in psychotherapy to be a means of changing the paradigm, opening the doors to other

models in addition to his own, and providing opportunities for future generations of psychologists to see clients as persons.

It is perhaps ironic that so much of his writing has become part of the international lexicon in both psychology and education that its roots have become obscured—a few examples are client-centered therapy, student-centered teaching, student-centered learning, helping professions, fully functioning person, person-centered therapy, person-centered learning, empathy, congruence, unconditional positive regard, case studies, and facilitative learning. The fact that Rogers coined or used many of these terms 60 to 70 years ago reflects the impact he had—and continues to have—on these fields. His thought was not static but continued to develop throughout his life; he was concerned that those self-styled "Rogerians" who followed his writings became fixed at a point in time, while his own thinking had evolved and moved in new directions. He once indicated that it was more important to him to find ways to help people than it was to defend or expand the client-centered approach to psychotherapy (Rogers & Russell, 2002, p. xxi). This entry provides an overview of Rogers's work and describes something of its influence on educational theory and practice.

Rogers's Background

Carl Ransom Rogers was trained in the psychological thinking of his time, including the behaviorist theories of John B. Watson, Ivan Pavlov, and B. F. Skinner that became very influential in the 1920s to 1950s. Skinner was a member of the peer group with whom Rogers interacted; later in life, they debated both face-to-face and by way of published exchanges. Rogers was able to transcend these contemporaries, and he challenged their thinking about the nature of control of human behavior, which they saw in terms of conditioning, schedules of reinforcement of responses, and the like—as became evident in his famous debates with Skinner. Rogers saw behaviorism as at best a starting point but clearly not an end point—he moved beyond approaching clients with a preconceived solution for their problems, instead spending time listening and then reflecting back to the clients what he had heard, so that they would become more aware of what they were expressing.

Rogers's first clinical position was in 1928 in Rochester, New York, where he joined the Rochester Society for the Prevention of Cruelty to Children as a

child psychologist; shortly after, he became the director of the Child Study Department. He stayed at the society for 12 years before taking a position in clinical psychology and a full professorship at Ohio State University. His move from a nonfaculty position to a full professorship was an extraordinary progression in academic ranks. His experiences working with delinquent and underprivileged children sent by the courts led to significant understandings about how young people function. Rogers soon realized that he could not solve their problems, as new ones always appeared at the next therapy session. He began looking for ways to facilitate the growth and development of the individual, and he began to understand the importance of the group as a support for troubled youth:

I think the case conference system that I developed at Rochester was one of the best things I did. It was not uncommon to have five or six agencies represented in the case conference, and I did develop my skill as a discussion leader so that when we got through there usually was a consensus. "All right, the school will do this; the court will do this; the social agency dealing with the family will do that," and they did it. So that sort of blanket approach really was often very effective. I look back on those case conferences and think (at the time it seemed to be the natural way to go about it) how rare it is that treatment plans are really put into effect in that complex kind of way. (Rogers & Russell, 2002, pp. 114–115)

Another interesting facet of his practice as a psychologist was his willingness to learn from his own failures, and he even used some of his "failed cases" as examples in his teaching.

Learning From Experience and Person-Centered Theory in Schools

In "Toward Becoming a Fully Functioning Person," Rogers asks three universal questions that form his philosophy of life: "What is the purpose of my life?" "What am I striving for?" "What do I want to be?" They form the basis of his focus on human learning: that the source of problems and their solutions rest with the individual. In this context, Rogers's experiences and research led him to conclude that

first, healthy individuals are open to experience: they don't hide from life they explore it. Second, living is a process: openness to experience necessitates an

absence of rigidity and allowing the time needed to change. Third, people must trust their own experiences. (Wertheimer, 1945, as cited in Rogers, 1999, p. 47)

The philosophy outlined above underpins the Rogerian approach to schooling—an approach that stands in marked contrast with that based on behaviorist principles. After decades of use in schools, the behaviorist model had not produced significant changes in student behavior. Rather, it limited the ability of the learner to become self-directed and self-disciplined, a necessary condition for the use of more complex instruction in teaching and learning (Freiberg, 1999; Freiberg, Huzinec, & Templeton, 2009; Freiberg & Lapointe, 2006). In contrast, Rogers's (1983) model of being "person-centered" in the classroom encourages teachers to facilitate (rather than direct) learning: "A person-centered way of being in an educational situation is something that one grows into. . . . It is a philosophy, built on a foundation of the democratic way, empowering each individual" (p. 5).

Being person centered in the classroom begins with building freedom for students through trust—providing them with opportunities to learn from one another and allowing them to use shared decision making. Rogers (personal communication with H. J. Freiberg, 1984) explained,

Granting freedom is not a method, it's a philosophy and unless you really believe that students can be trusted with responsibility, you won't be successful. Now, you can't build that philosophy out of thin air, you have to build it out of experience.

A meta-analysis research review by Cornelius-White (2007), spanning 56 years and encompassing 119 person-centered and student-centered learning studies, found positive cognitive and affective learner outcomes in person-centered environments, including creativity/critical thinking, achievement (mathematics/verbal), student participation, student satisfaction and self-esteem, reduction in dropouts, increased motivation to learn, less disruptive behavior, and fewer absences.

A person-centered classroom is balanced between the needs of the teacher and the learner. Movement from teacher-centered to person-centered classroom is a gradual progression of building trust and developing shared responsibility for the management of the classroom. Consistency Management and Cooperative

Discipline (Freiberg, 1999), a person-centered classroom management model, presents four dimensions that foster person-centered classrooms: (1) social emotional emphasis—teachers demonstrate caring for students' social and emotional needs, and for who they are as people; (2) school connectedness—teachers ensure that students feel a strong sense of belonging to the school, their classroom, and their peers; (3) positive school and classroom climate—students feel safe in school, developing trust for their peers and their teacher; and (4) student self-discipline—students learn through responsible actions and a shared respect and responsibility. This model has shown significant gains in student achievement in elementary and secondary inner-city schools. In addition, the model has shown significant improvements (Opuni, 2006) in school climate and reductions in students' office discipline referrals and in student and teacher attendance.

Conclusion

On January 28, 1987, Rogers was nominated for the Nobel Peace Prize; he died one week later on February 4, 1987, and the nomination arrived just after his death. His influence reaches far beyond his lifetime; he was judged to be the sixth most eminent psychologist of the 20th century, ranking second among clinicians behind Sigmund Freud (Haggbloom et al., 2002).

H. Jerome Freiberg

See also Behaviorism; Freud, Sigmund; Neill, A. S., and Summerhill; Psychoanalytically Oriented Theories of Child Development

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ROUSSEAU, JEAN-JACQUES

Jean-Jacques Rousseau (1712–1778) is one of the most influential philosophers of education in the Western world. His magisterial study, *Emile, or On Education*, published in 1762, was a literary sensation and provoked controversy immediately after publication. The book was burned in Paris and Geneva, because of Rousseau's teachings against original sin and his downplaying the role of the Church and of scripture in religious education. Rousseau was not the first philosopher who challenged the Christian dogma of sin, but he was the first who conceived of a child without any form of sin. His argument for a natural education is still discussed today.

One of Rousseau's greatest followers was no less a figure than Jean Piaget. But Rousseau's teachings also influenced present-day approaches to free schooling and many projects in alternative education. The question is how much he was—and is—read, and if the references to his work are more than just mere name-dropping.

This entry offers a review of Rousseau's life and work, with particular attention to his provocative ideas on education and the nature of society, and concludes with a discussion of his lasting influence on educational and social thought.

Life and Work

Rousseau was born in 1712, and raised in Geneva, the center of Calvinism. John Calvin, not a native Genevan, published his *Institutes of the Christian Religion* (*Institutio Christianae Religionis*), his central work on education, in 1536; this work contained a discussion of the doctrine of predestination. Rousseau's life and work is, in many ways, a manner of dealing with Calvinism. Following the banning and public burning of his books, Rousseau dispensed with citizenship of the Republic of Geneva in 1763, but not his membership in Calvin's church, which he had renewed in 1754.

Rousseau had attempted to gain control over his biography by writing his *Confessions*, which were published posthumously in 1782, and indeed, this work has determined the image of Rousseau since then. But the facts are as follows: Rousseau's dramatic life was characterized by his rising outside the elite and always being an outsider. The young Rousseau completed an apprenticeship as an engraver; his restless career moved between Geneva and Paris, and after various wanderings and low-level work, he took up a position as a private tutor in Lyon in 1740 and wrote his first text on education (*A Memoire to M. de Mably*; Rousseau, 1969, pp. 1–32). In 1742, he went to Paris and published his *Dissertation on Modern Music* in 1743. Then, in 1749, Rousseau wrote articles on music for Denis Diderot's *Encyclopedia*, and his first major literary success came one year later with *Discourse on the Sciences and the Arts*, which was awarded a prize by the Academy of Dijon. From 1756 on, Rousseau, living now in the Hermitage in Montmorency, concentrated on his three major works: *The New Eloise* (1761), which was a successful novel, widely read in Europe; the *Social Contract* (1762), Rousseau's theory of society; and *Emile, or On Education* (1762). The books on the social contract and on education were banned immediately after publication and were publicly burned in both Paris and Geneva.

After this, Rousseau had to keep moving ahead of the authorities. He was granted asylum by the Prussian governor in Neuchâtel soon after his fleeing Paris, but, at his place of refuge in Môtiers, he

was subjected to attacks by varied authors such as his archenemy Voltaire and the general procurator of Geneva, Jean Robert Trochin. At the same time, Rousseau became the idol of the generation of *Sturm und Drang*; young literati from throughout Europe visited Rousseau in Môtiers and made him famous. In January 1766, Rousseau made for England following an invitation by the Scottish philosopher David Hume, but soon their relationship deteriorated. Rousseau returned to France and worked, with increasing paranoia, on his autobiography, which could be viewed as an attempt at self-therapy. His precarious financial situation was relieved in May 1778 when Rousseau and Thérèse Levasseur (his mistress of many years, whom he married in 1768), moved to an estate owned by the Marquis de Girardin, who became Rousseau's last benefactor. Rousseau's sudden death on July 2, 1778, ended a very unlikely literary and philosophical career.

Education and Society

The archbishop of Paris, Christophe de Beaumont, justified the banning and burning of Rousseau's *Emile* because of its denial of the doctrine of original sin. In fact, Rousseau (1969) assumed that "there is no original sin in the heart of man" (p. 322). In his defense against Beaumont, printed at the beginning of 1763, Rousseau formulated a far-reaching dualism that has since dominated political and educational conceptions—*nature* versus *society*. The present social order runs counter to human nature in every respect, and this opposition explains the vices of men and the evils of life. The assumption of original sin is superfluous, for man could live without sin if nature and society corresponded and harmonized. In this respect, Rousseau had a post-Augustinian concept of education in mind, which was developed in *Emile*.

Essentially, the theory has three themes:

1. The political difference of *civil man* and *natural man*
2. The assumption of phases of "natural development"
3. The anthropological difference of *love of self* (which does not require the good opinion of others) and *self-love* (which does)

Rousseau's concept of education is constructed using these points. His view is peculiar *not* because it

stresses *natural education*, a term that was established in educational discourse long before Rousseau; the peculiarity arises from the paradoxical attempt to solve the contradiction between nature and society *by way of education*. To this end, Rousseau draws a distinction between two contrary types of education, that given by *nature* and that by *society* (p. 58). These refer to two ways of living—the life of the natural man and the life of the civil man. Both of these are described in a way contrary to Thomas Hobbes—who, in his *Leviathan* (1651/1968), distinguished between the *natural* and the *social* condition. Society, for Hobbes, tames and cultivates nature, thus repression of nature is unavoidable. Rousseau reversed this; for him, the social condition is that of ongoing civil war—the war of all against all—while the natural condition is considered to be presocial peacefulness.

Rousseau justified his fundamental thesis in the second *Discourse*, dated 1765, which was on the evolution of inequality (Rousseau, 1964, pp. 109–194). Rousseau explains *inequality* in terms of society's corruption of human nature. What is called *homme sauvage* (savage man) is considered to exist on the basis of his own strengths, while the *homme civilisé* (civil man) develops social needs that render him dependent and weaken his nature. The division of labor, the development of knowledge, and the connected social differentiation (Rousseau, 1964, pp. 143 ff.) forcefully brought about a progressive inequality among men. The condition of innocence and natural freedom is left behind; in this respect, it is *society* that causes the Fall of Mankind, *not nature*.

The theory of education in *Emile* picks up the evolution thesis and applies it to the development of the child. Rousseau's risky thought experiment goes as follows: If children are seen as the *homme sauvage*, then social factors need to be excluded for the duration of their education. This assumption leads to the basic scenario of *Emile*: The young Emile is exclusively educated by a tutor away from society. The scene is an anonymous countryside estate far from corrupt cities and raw villages—that is, it was cut off from the social condition as Rousseau (1969) viewed it (pp. 264, 267, 279). The place in which the story is told is described simply as “in the middle of fields” (p. 277) without any details regarding the origin and personal history of the two protagonists. Thus, the tale is not a novel of education but a treatise that is intended to describe the paradigm of true education. The name “Emile” is presumably

reminiscent of Plutarch (Shanks, 1927); it has no biographical meaning. Accordingly, the tutor is not given a name and is thus not distinguishable. Both are paradigms, not persons.

“Natural education” is *negative* education. Rousseau largely draws on the phases of human development from the *Histoire Naturelle* by Comte de Buffon, and he understands all of childhood as the “age of nature,” in which development must take place outside corrupt society. Thus, early education is entirely negative. It does not teach virtue or truth, but it avoids vices and errors to produce innocence of heart. The concept of negative education is aimed at John Locke, whose *Some Thoughts Concerning Education* had been available in French since 1695 and had considerable influence. Locke's central idea, that children are to be treated as rational creatures, aroused a passionate contradiction in Rousseau. For him, reasoning with children was nothing other than the reversal of nature's plan. Development of reason is the aim of education, but the end cannot determine the beginning: “If children could understand reason there would be no need to educate them” (Rousseau, 1969, p. 317). Childhood has its *own* manner of seeing, thinking, and feeling, which is not that of the adult (Rousseau, 1969, p. 319), but Locke's concept of reason is that of adults outside the world of children.

It is this idea, that there is a distinct world of childhood, that has justified Rousseau's (1969) fame in education, along with the metaphor of pure education outside society and the spontaneity of children, who are considered to be led by immediate interests (p. 358). On these grounds, Rousseau seems to be the creator of modern education, which stresses the “new” image of child and childhood. In this respect, the point is often overlooked that *Emile* clearly has a theological center; that the treatise ends by giving preference to the republic, not to nature; and that the whole theory presents *two* concepts of education with differing gender forms. The center of *Emile* is the concept of “natural religion,” justified in the “Profession of Faith of a Savoyard Vicar,” a treatise within the treatise (pp. 565–635). Rousseau takes the role of the vicar who—against the materialism of the Parisian philosophy—announces a supreme being or an active creator who is assumed to be “King of Earth.” Being in unison with creation cannot mean anything sinister: “Where everything is good nothing can be unjust.” The good can be seen in creation, justice emanates from the good, and only a just person can live happily, but the

enthusiasm for virtue is an *inner* principle—that of the heart and not of reason. Consequently, the key to the profession of faith is the following: “We can be men without being scholars” (p. 601).

Man is all the happier the fewer the needs he has and the more he can avoid comparisons with others; in contrast, the things that make man suffer ills and evils are *too many* needs and *too many* opinions—in other words, dependency on others. Consequently, Rousseau (1969) develops the concept of “solitary education” (p. 341), which isolates the fictitious Emile throughout his childhood, totally controls learning, and stipulates the didactic scenario on the theory of natural needs. Therefore, Emile does not receive lessons, is not provided with any written works, and is excluded from all forms of cultural education. Only at the age of reason—youth—does he require formal lessons; his entire childhood is directed by nature, which in the novel only occurs in a didactic manner. Indeed, the entire course of Emile’s early education actually is extremely artificial; the tutor (and he alone) arranges the entire experience, and it is not by chance that *Robinson Crusoe* is the only literary work that Emile is given to read (pp. 455 ff.).

The concept of solitary education refers to the education of *man*. However, in the beginning of the fifth book, Rousseau introduces “*Sophie, or woman*”—that is, he is forced to react to the difference in sex. The education of “woman” is given an equally generalized treatment as was previously the case with Emile. Rousseau’s *homme sauvage* is stated to be male and (therefore) “strong,” “sovereign,” and “independent,” while Sophie, the generalized woman, is educated in a manner so that she can see herself as being in complementary dependence to males. The education of the sexes is therefore not equal, but it is quite dissimilar (Rousseau, 1969, pp. 700 ff.). Because men want to seduce, they are dependent in the crucial moment—women have to agree and can say “Yes” or “No.” This female strength can only be developed by binding the woman to the house and forcing her to be virtuous. The “mutual dependency” is therefore not symmetrical: Men are dependent on women because of their desires, women are dependent on men as a result of their wishes *and* needs. Accordingly, “by the law of nature itself women are at the mercy of men” (Rousseau, 1969, p. 702), not vice versa. Needless to say, Rousseau’s views on the education of Sophie have provoked a great deal of criticism in our own time.

Rousseau’s (1969) treatise about education ends with a grand tour (pp. 826–855) that is intended to introduce Emile to the basics of government theory (i.e., the doctrines of Rousseau’s own *Social Contract*), and it is envisaged that a well-educated *man* will become a respectable *citizen*. Emile has to learn what defines the status of citizens and thus the constitution of society. The small *republic* is given preference, one in which there can be an ideal relationship between population and government. Obviously, the Republic of Geneva, idealized by Rousseau during his lifetime, is the model here, but, of course, the ideal Republic is seldom achieved.

Crucially, Rousseau had two views on society: First, there is the ideal of the social contract, a model for social order that is mainly grounded on the concept of *volonté générale*, the general will behind all singular wills (Rousseau, 1964, pp. 361 ff.). The second is the polemical description of general decadence within the existing society. In no place does society comply with the ideal; therefore, the grand tour ends without result. Emile and Sophie, educated differently, are not released into society *as citizens* but led to marriage and family (Rousseau, 1964, p. 867). More is not possible, the ideal society is not realized anywhere. The social ideal has no social place. The decadent society, on the other hand, is morally unacceptable, and the real society has its place but not a legitimate form. Thus, loneliness (solitude) is in the end stronger than sociality (Starobinski, 1971), because education will not change society but can only develop man’s nature. The great project of “humanization” through natural education (as stated by Ravier, 1941) fails due to its own ambitions and contradictions. “Nature” in the framework of Rousseau’s *Emile* is an artificial entity, where learning is bound by didactic parameters, control is total, and sentiment for the children’s *own* world arises from the fiction of a good and equal nature that does not mirror any child’s individuality (Oelkers, 2008).

Reception and Enduring Influence

The reception of Rousseau’s work over the ages demonstrates the often dramatic and always radical conflict between convinced supporters and equally convinced adversaries. Rousseau divides his readers even today. His interest in the ideals of antiquity, especially those of Sparta and Athens, suggest that there was a *golden age*, which can be understood as an anticipation of the future, the restoration

of the “true society” that once was. It was not by chance, therefore, that Rousseau was the hero of the Jacobins—the cult established during the French Revolution—and was against all conservative theories that negated revolutionary change in favor of the long-term, and thus slower, development of society. Rousseau’s *Social Contract* represents the *new* society that conservatives can only deny. The tension between freedom and equality attributed to—and paradoxically and provocatively described by—Rousseau characterizes one major part of political theory up to John Rawls’s reformulation of the *Social Contract*. The same applies to the theory of “natural education”: Rousseau’s *Emile* is a key source for Leo Tolstoy and the reform movements of the 19th century, a central inspiration for Piaget and the development of child psychology, and a milestone for progressive education.

Of central importance are the dualisms in Rousseau. He stresses contradictions and paradoxes between nature and society, men and citizens, children and adults, and, not least, male and female. John Dewey (1985), who rejected and attacked dozens of dualisms, nevertheless recognized Rousseau as the founder of the theory of “natural development” (pp. 211 ff.). The famous ascription “return to nature”—part of 19th-century readings of Rousseau but not stated by him directly—was regarded as an emancipation from alienation, thus a project of the left. But Rousseau was, at the same time, both a radical *and* a conservative: He stated that society should return to the golden age, education should leave schooling for nature, that man should first be a man and then a citizen. It is this that fascinated Rousseau’s readers, followers as well as opponents.

Thus, his theory of education is provocatively puzzling: The “negative education” has no positive objective—nature develops along its own course. However, the learning process is subject to extreme regulations. The present should not be made a victim of the future (Rousseau, 1969, p. 309), but every education is a deal with the future, and this is also true for Rousseau. The ages of childhood, and of youth, are clearly defined, and so are the phases of education. Nevertheless, the tutor dominates all education. Nature should lead the way, but everything possible must be done to avoid taking the wrong step. Children stand like savages outside the social law and are completely natural, but education must undertake to *exclude* chance, and thus, children are not able to act *solely* in accord with the necessity of nature. Early education should be that of the *senses*

alone, but this requires a rational plan of education that cannot simply be drawn from nature. And, as a consequence, the education depicted by Rousseau is one of extreme regulation: Emile does not play, he does not develop any facilities of his own and is not allowed to listen to music, and his learning differs in every way from “amusement”; his education should be “realistic,” but this is possible only in an extremely artificial—nonnatural—manner.

Child-Centered Education

Rousseau wrote the counterproject to the educational theory that dominated the pedagogy of the 18th century. Children, according to Rousseau, should not be viewed as empty vessels or *tabulae rasae* waiting to be filled via education, but instead, they should be seen as parts of nature that develop of their own accord. Education is not merely the establishment of habits and customs; moreover, the child’s nature sets limits on all education. This fundamental outlook, however, is weakened by the *implicit* sensualism—the education of the senses—that is necessary, because education is inconceivable *without any* influence. But the provocation remains, and it defines Rousseau’s standing as an educational theorist. Education is limited by nature, nature has nothing to do with sin, and the child is innocent because of nature’s original goodness; thus, education can take place without any burdens of history and society. There is a renewal of mankind with every new child. This is the basic point of Rousseau’s theory, which continues to this day to provoke *and* stimulate educational thought. Rousseau is read because he defines the problems not because he provides the solutions. But “education according to nature” became firmly associated with the name of Rousseau; the term *Rousseauism* was coined, and before World War II, it was commonly understood in the history of education that “new education” started with Rousseau and no one else (Oelkers, 2002, 2008).

Jürgen Oelkers

See also Froebel, Friedrich; Locke, John; Piaget, Jean; Progressive Education and Its Critics; Utopias

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RUSSELL, BERTRAND

Along with the likes of Socrates and Plato, Bertrand Russell (1872–1970) is one of the select group of outstanding philosophers who have exerted a major influence on education at all levels. This entry first outlines Russell's many and diverse contributions to education and then discusses issues arising from his technical philosophy.

Russell on Education

Popular Education

Many of Russell's nonphilosophical books, written for a wider audience, made a major contribution to public debate and progressive thinking. In widely read works such as *Principles of Social Reconstruction* (1916); *On Education, Especially in Early Childhood* (1926); *Marriage and Morals* (1929); and *Education and the Social Order* (1932), Russell propounded challenging but influential ideas and proposals on topics as diverse as the importance of sex education, the desirability of a worldwide curriculum, and the differences between education and indoctrination.

Philosophical Education

Whatever philosophers might think of its ultimate worth, Russell's *A History of Western Philosophy* (1946) has undeniably served as the vehicle for inducing countless people into a serious study of philosophy.

School Education

Harboring strong intellectual reservations about contemporary schooling, Russell and his second wife, Dora Black, solved the problem of how to educate their own children by setting up a progressive, experimental school, Beacon Hill School, in 1927. The school emphasized enabling students to find solutions to problems and to identify and question assumptions. According to the school prospectus, morality and reasoning were to arise "from the children's actual experience in a democratic group and never of necessity from the authority or convenience of adults." Though Russell's practical involvement was necessarily somewhat less than Dora's, given his other activities, the school did embody many of his proposals for sound education. The school itself, though relatively short lived,

became an important example in the history of progressive education.

Russell's Philosophy

However, despite these substantial contributions to education in its broadest sense, Russell's own serious work in philosophy cannot be judged to have had any significant impact on either philosophy of education or on educational thought more broadly. The reasons for this can be discerned from a brief outline of the key ideas that characterized Russell's overall approach to philosophy and the various phases within his philosophical development. These phases can be summarized as follows:

Youthful idealism (up till 1899)

Platonism (1899–1913)—key work: *Principles of Mathematics*

Empiricism (1914–1918)—key works: *Our Knowledge of the External World* and *The Philosophy of Logical Atomism*

Modified empiricism (1919 onward)—key works: *The Analysis of Matter*, *Human Knowledge: Its Scope and Limits*

The various changes across these phases are marked by a striking continuity centered on Russell's method of analysis. Briefly, Russell invented his own unique method for conducting philosophical analysis, one that was crucial to his abandonment of idealism and was prominent in all of his subsequent philosophical work. Russell's philosophical method is two directional. First, it moves backward from a supposed body of knowledge (the "results") to establish premises for the results; second, it moves forward from these premises to a reconstruction of the body of knowledge that was the starting point. Russell referred to the first stage as "analysis" and the second as "synthesis," but, crucially, both stages were central to how he carried out philosophical analysis. In the early phases, mathematics provided the "results" to which Russell applied his philosophical analysis. (For detailed discussion, see Hager, 1994, 2003.)

Applications of this method of analysis in the Platonist phase included the logicist reduction of numbers and other mathematical entities (the "results") to sets of sets (the "premises"). But in the Platonist phase, Russell was committed to a realm of subsistent being, including, for instance,

points and instants. These were treated as real entities known only by description. The move to empiricism was stimulated by Alfred North Whitehead's demonstration that points and instants (the "results") could be logically constructed from sense-data (the "premises"). Thus, Russell's (1914) goal in the empiricist phase became to "exhibit matter wholly in terms of sense-data, and even . . . the sense-data of a single person, since the sense-data of others cannot be known without some element of inference" (p. 12).

This ideal was never achieved, and the logically perfect language in which it was to be carried out was never realized. Instead, Russell came to accept the inescapable need to postulate inferred (or non-experienced) entities. Albert Einstein's work had undermined his empiricist phase attempts to correlate physical space and time with subjective space and time. So Russell adopted a neutral monist position in which the inferred entities are events, of which sense-data are a subclass.

Across all of these phases, Russell's attempts to reconcile mathematics and science with philosophy via his distinctive philosophical method remained a constant. What changed was his understandings of the nature of the "results" supplied by mathematics and science.

Russell's concentration on mathematics and science as the sources of "results" for philosophizing had the effect of limiting the scope of philosophy. He regretfully accepted this consequence:

There remains, however, a vast field, traditionally included in philosophy, where scientific methods are inadequate. This field includes ultimate questions of value . . . philosophers who make logical analysis the main business of philosophy . . . confess frankly that the human intellect is unable to find conclusive answers to many questions of profound importance to mankind. (Russell, 1946, pp. 788–789)

This point helps explain the minimal impact on philosophy of education of Russell's serious philosophical work. His penchant for science as the source of results for embarking on analysis also explains why behaviorism was the main inspiration for what thinking he did undertake about teaching and learning (evidenced by various unpublished papers held in the Bertrand Russell Archives at McMaster University). If the limited importance of behaviorism for subsequent educational thought

squares with Russell's minimal impact on philosophy of education, a further relevant factor might be his preferred approach to epistemology.

As the phase names *empiricism* and *modified empiricism* suggest, Russell accorded primacy to the experiences of the lone observer of the world. In the empiricist phase, his ideal was to reconcile physics with the sense-data of a single mind. Though his modified empiricism recognized that this ideal was unattainable, the focus shifted to the list of postulates that were needed by the lone mind to reconstruct science. Overall, Russell's evolving epistemology amounts to what John Dewey famously dubbed "a spectator view of knowledge." By contrast, rather than viewing the basic human condition as that of a spectator mind observing an external world, Dewey insisted that it is a matter of "doing and being done by," of holistic mutual interaction. Significantly, later influential theories of learning have gone Dewey's way rather than Russell's. So we are left with the rather odd situation of a major philosopher having very significant influence of education more broadly yet little discernible impact on philosophy of education.

Paul Hager

See also Behaviorism; Progressive Education and Its Critics; Spectator Theory of Knowledge

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SARTRE, JEAN-PAUL

Jean-Paul Sartre (1905–1980) was a prominent French philosopher and an extraordinarily versatile and prolific writer. As a philosopher, he is noted for leading the philosophical movement called “existentialism,” which dominated European intellectual life in the 1940s and 1950s and exerted a worldwide influence on educational theory and practice in the subsequent two decades. His writings include two massive and systematic works of philosophy; several novels, plays, and screenplays; a book of short stories; an autobiography (covering only his childhood); several biographies of other writers; and scores of essays on art, literature, politics, and current events. In 1964, he won the Nobel Prize for Literature but declined it.

Sartre’s works attempt to describe from the “inside,” that is, from the standpoint of the individual’s subjective experience, the most fundamental features of human existence, including freedom, responsibility, the emotions, work, embodiment, perception, imagination, and the individual’s relation to other persons, to complex social collectives, to the cultural world of artifacts and institutions, and to death. Despite the comprehensiveness of this project, his writings do not include a sustained, thoroughgoing discussion on the topic of education. Nonetheless, his philosophical views are richly suggestive of educational implications.

Sartre on Education

Much of Sartre’s work is concerned with attacking what he takes to be a widespread tendency of

attempting to avoid taking responsibility for one’s beliefs and actions by accepting as “true” and “right” doctrines that one has passively received from authorities, such as God, society, or one’s parents or teachers. Sartre argues that such a strategy does not relieve anyone of personal responsibility, since the acceptance of someone else’s authority is not an *alternative* to personal choice but rather an *example* of it. Those whose beliefs are indefensible cannot legitimately evade responsibility for them by pointing out that they were adopted at second hand. Rather, such persons are answerable precisely for their decision to rely on these particular authorities and, indeed, for adopting this general strategy when they could have chosen differently.

From the standpoint of educational practice, the most important implication of this point is that students should be encouraged to pursue understanding actively rather than to conceive of their education in terms of passively memorizing and accepting unquestionably the ideas of others. Sartre makes the point that just as no one else can die for me, so no one else can *understand* for me. Genuine understanding requires critical and creative *engagement* with ideas. Determining what to believe, in a genuinely responsible way, requires a careful weighing of evidence and arguments, a process that brings the additional benefit of furthering the student’s personal growth as an independent person.

Another educational implication of Sartre’s philosophy is that education should not be so heavily geared as it currently is toward helping students fit into existing social, political, and economic structures, at the expense of encouraging them to think

about how these structures might be significantly changed for the better.

His thinking on this issue is heavily influenced by his experiences in Nazi-occupied France, where everyone had faced the difficult decision of choosing either to accommodate oneself to the new collaborationist regime or to put oneself at grave risk by fighting it. In response to the objection that our current situation is entirely disanalogous to that of the French resistance fighters of the 1940s, Sartre would insist that the contemporary world is still the scene of many appalling injustices and that the lesser intensity of our situation only *increases* our responsibility—we don't face death as a consequence of our activities in pursuit of a better world.

One of the specific responsibilities of educators, according to Sartre, is to challenge the propaganda that is regularly disseminated by those powerful forces whose primary interest lies in something other than truth. For example, as one of the few significant institutions that is not entirely driven by commercial considerations, education is well positioned to shine a critical light on the overarching message of the commercial media—that the key to happiness and the good life is consumption.

As a champion of “committed writing,” Sartre would also argue that educators should encourage students to take a stand on issues and to take action on behalf of their principles. He would oppose the idea that students should be expected to be “neutral” or, even worse, that they should be taught that a centrist, middle-of-the-road position is automatically wisest and best. The identity of the best idea or theory should be determined by evidence and argument, not by an a priori commitment to fitting into some preestablished “mainstream” of opinion.

To facilitate such a quest for wisdom and truth, problems and issues—rather than academic disciplines—should serve as the focus of study. The reason is that real problems are interdisciplinary and cut across the somewhat arbitrary boundaries that divide academic subjects from one another. To deal satisfactorily with the problem of global warming, for example, requires a cross-disciplinary engagement with its scientific, economic, political, and moral aspects, among others.

Above all else, a Sartrean approach to education would stress the great existential issues that each person must confront: What is the meaning and purpose of life? What is important? What should I stand for? How should I live? For Sartre, if these issues are overlooked, in favor of a focus on more technical

or career-oriented concerns, no “education” that is worthy of the name can take place.

David Detmer

See also Beauvoir, Simone de; Heidegger, Martin; Phenomenological Pedagogy; Phenomenology

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SCHEFFLER, ISRAEL

Israel Scheffler (1923–2014), a long-standing faculty member at Harvard University, was one of the leading figures in Anglo-American philosophy of education during the second half of the 20th century, but he was also an eminent scholar not only in this domain but also in epistemology, the philosophy of language, and the philosophy of science. The two-way connection between general philosophy and the philosophy of education is characteristic of Scheffler's work. At the heart of his philosophy of education is the ideal of rationality—Schefflerian rationality refers to the critical spirit and quest for reasons as well as to the competence and disposition to evaluate these reasons, and it has both epistemological and moral significance.

Philosophical Context

Scheffler's philosophy of education cannot be understood properly apart from the context of his wider philosophical work. First, his philosophy of education in general reflects his background in analytic philosophy and philosophical pragmatism. Second, Scheffler's notable redefinition of the concept of objectivity and his defense of the ideal of objectivity in epistemology and philosophy of science are

important for adequately interpreting his formulation of rationality as a crucial educational ideal. Third, two particular sources of inspiration must be mentioned in contextualizing Scheffler's work: One is the philosophy of Nelson Goodman, who was the supervisor of Scheffler's PhD and, later, his Harvard colleague and friend; the other is his Jewish background and education.

Scheffler's philosophical approach is rooted in the tradition of analytic philosophy, and especially the philosophical insights—as well as the controversies—of the Vienna Circle, which has exhibited a lasting effect on the focus and style of his philosophy. The idea of dissolving philosophical problems by elucidating the ordinary language in which they are formulated and the idea of applying symbolic logic to problems are legacies from analytic philosophy in Scheffler's work. In addition, the presuppositions of philosophical pragmatism can be seen in Scheffler's epistemology, philosophy of science, and philosophy of education. The commitments to fallibilism in epistemology, on the one hand, and to the analogical role of rationality in science education and moral education, on the other, reflect the key ideas of classical pragmatists such as Charles S. Peirce and John Dewey.

Scheffler's work on symbolism again draws on classical pragmatism by developing the theory of thinking and learning as mediated by symbols. Scheffler's symbolism is also closely related to the work of Goodman. Scheffler's work in this area extends the considerations of the symbol-forming capabilities of the human mind in the realms of education, learning, and religion.

Scheffler's Jewish background provided him with the kind of cultural bilingualism that is a typical feature of many of the great philosophers. Furthermore, in his 1995 book, *Teachers of My Youth*, he describes the similarities of his Jewish education and his philosophical emphasis on the process of "continual interpretation" and "the patient and endless process of human study," contrary to learning through "magic," "visions," "formulas," or "authority" (pp. 185–186).

Scheffler's defense of objectivity was one of his most important contributions in the fields of epistemology and philosophy of science. Scheffler defended the possibility of objectivity from its various criticisms and formulates an interpretation of objectivity that does not depend on the possibilities of certainty or truth but preserves, nevertheless, the possibility of evaluating and comparing rival systems of belief.

As Alven Neiman and Harvey Siegel (1993) have demonstrated in their "Objectivity and Rationality in Epistemology and Education: Scheffler's Middle Road," objectivity and rationality are conceptually intertwined intellectual ideals: "Objectivity requires fair assessment on the basis of relevant reasons, evidence, and test; rationality requires that such assessment be objective, i.e., fair, impartial and independent" (p. 61).

Philosophy of Education

The key to Scheffler's philosophy of education lies in his interpretation of the notion of rationality, the development of which he takes as a fundamental educational ideal. In the first place, Schefflerian rationality must be separated from instrumental accounts of rationality, those that understand reason merely as an instrument for assessing the means to achieving ends, whereas the ends themselves are understood as being beyond the limits of reason. In Scheffler's account, the ends also can be rationally evaluated. In the second place, Schefflerian rationality must not be understood as contrasting reason with emotion. Although reason and critical thinking are important means for preserving us from emotional manipulation, emotions also serve a positive function in cooperation with cognition in the processes of achieving new understanding through learning or inquiry. In the third place, the realm of rationality is wider than the realm of science, and the ideal of rationality is applicable, for example, in the realm of ethics. These three observations are crucial in avoiding the erroneous assertion that the focus on developing rationality narrows the scope of education.

In *Reason and Teaching*, Scheffler (1973) states that "the proper scope of education is as large as civilization itself." He strongly opposes any attempts to narrow this scope: "A limitation to the cognitive and the academic, not to say the hard core of science, mathematics, and technology, would, in my view, be a disaster." Thus, according to Scheffler, narrowing the scope of education narrows "our operative conception of civilization" (p. 60).

The educational ideal of rationality has both epistemological and ethical import. Epistemologically, rationality is connected with the best means of achieving proper understanding. Ethically, an educator must be committed to fostering students' abilities in critical thinking, in the search for reasons as well as enabling them to question their own conceptions.

Furthermore, education that fosters rationality is connected with the flourishing of democracy, since democracy needs citizens who are capable of thinking critically and questioning their own conceptions regarding the adequate solutions of shared problems.

Another ethical and societal dimension related to the cultivation of rationality is that it protects people from the manipulative exercise of power by political or religious authorities, and consequently, it protects democratic societies from the threat of totalitarianism. In this sense, the commitment to the ideal of rationality is also the task of philosophers in general. In educational terms, the fostering of rationality differentiates ethically justifiable education from modes of indoctrination. Although Scheffler is critical of some of Dewey's epistemological conceptions, these ideas on the relationships among education, democracy, and reason clearly bear Deweyian echoes.

Another important pragmatist tone in Scheffler's thinking is his work on symbolism. Scheffler develops his theories of learning and creativity by drawing on the idea of the symbol-forming character of the human mind, as developed by classical pragmatists such as Dewey, William James, George Herbert Mead, and Peirce. Scheffler defends the theory of symbolic mediation as important in adequately conceptualizing human nature and potential and, consequently, the processes of education and learning.

Conceptual and argumentative clarity is characteristic of Scheffler's work throughout. Especially at the beginning of his career in the philosophy of education in the 1950s and the 1960s, Scheffler advocated using the methods of analytic philosophy in the philosophy of education as well. *The Language of Education* (Scheffler, 1960) exploits the methodological tools of the philosophy of language by analyzing educational slogans, myths, and metaphors, and *Conditions of Knowledge* (Scheffler, 1965) manifests the idea of the analytic philosophy of education in carefully analyzing the connections between epistemological and educational concepts, such as knowledge and teaching. *Reason and Teaching* (Scheffler, 1973), for its part, represents the broader focus by analyzing the relationships between moral education and science education, philosophy and political activism, and education and democracy. *In Praise of the Cognitive Emotions* (Scheffler, 1991) continues this process of widening the perspective by analyzing, for example, the role of emotions in the process of inquiry. *Of Human Potential* (Scheffler, 1985) takes the philosophical position toward learning by drawing from symbolism developed in

the tradition of pragmatism, and *Symbolic Worlds* (Scheffler, 1997) develops the theory of symbolism in various contexts, such as art, language, play, religion, and science.

In the new millenium, Scheffler formulated the epistemological and ontological position he termed *plurealism*—a synthesis aiming to solve the long-standing disagreement between Goodman and Scheffler on the issue of realism by uniting the pluralist conception of the symbol systems by which we describe the world(s) with the realist assumption of the independence of the described from the description. Although plurealism is not, as such, a contribution of philosophy of education, it coheres with Scheffler's educational theorizations and has important educational implications in preserving both the plurality of the systems of description and the possibility of evaluating and improving these systems.

The analytic style of philosophizing as well as the centrality of the ideal of rationality in education have naturally confronted various criticisms over the decades. Rationality as an epistemological and educational ideal has been criticized from political, cultural, and feminist angles, and Scheffler replied to many of these criticisms himself. The analytic tradition, for its part, has been seen as too narrow a focus in relation to wide-ranging educational concerns. Although this criticism was true for analytical philosophy in general, it is not true for Scheffler's work, since his philosophy, although preserving the ideals of conceptual and argumentative clarity, has a broad focus, including themes such as art, morality, and religion.

Scheffler has had an immense impact on the philosophy of education in the English-speaking world, and his works have also been translated into many other languages. The exceptional nature of his philosophy of education lies in the two-way relationship between general philosophy and educational concerns. The methods of analytical philosophy and the insights of philosophical pragmatism are, in Scheffler's work, in dialogue with the ethical and practical questions confronted by education. Scheffler's interpretation of rationality as a crucial educational ideal is an example of a contribution to the philosophy of education that unifies the moral, philosophical, and practical dimensions, all of which are crucial to the comprehensive theorization of education.

Katariina Holma

See also Continental/Analytic Divide in Philosophy of Education; Critical Thinking; Dewey, John; Peters, R. S.; Rationality and Its Cultivation; Scheffler, Israel; Wittgenstein, Ludwig

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SCHLEIERMACHER, FRIEDRICH

Friedrich Daniel Ernst Schleiermacher (1768–1834) was not only a prominent philosopher (contributing to hermeneutics, ethics, and the philosophy of language), Protestant theologian, and philologist (e.g., a translator of Plato) but also one of the most original philosophers of education of his time. The magnitude

of Schleiermacher's work is comparable with that of his contemporaries Johann Gottlieb Fichte, Friedrich Wilhelm Joseph Schelling, and Georg W. F. Hegel; he is widely regarded as the single most important Protestant theologian of the 19th century. Schleiermacher's philosophy of education, although neglected in English, is indispensable for two reasons: (1) his groundbreaking theoretical insights into education position him (together with J. F. Herbart) as one of the founders of modern educational science (*Erziehungswissenschaft*) and (2) his contributions to the reorganization of the Prussian education system, especially in shaping the new Berlin University (later, the Humboldt University), in some ways exceed those of Wilhelm von Humboldt himself. Highly admired as a preacher and academic, Schleiermacher introduced a type of educational thought and practice that is clearly different from the pedagogy of the often utilitarian and mercantilist Enlightenment pedagogues (Philanthropists), with their sometimes autocratic, and frequently normative and programmatic, emphases. Schleiermacher's approach provides a means of describing and analyzing the prevalent educational practices, rather than of prescribing ways of remaking or redeeming the world through them. Working at the very outset of the fragmentation of the modern age, Schleiermacher presented education as ruled by dialectical tensions between theory and practice, the universal and the particular, society and the individual, and stability and change.

Philosophical Foundations of Educational Theory

To theorize about education is to take part in the all-encompassing process of the dialectical integration of nature and reason through human reflective labor in the world (Schleiermacher, 1996). Accordingly, educational theory is that dimension of reason that reflects on, describes, and analyzes educational practice (Schleiermacher, 1811/2000). It is one of the great insights of Schleiermacher that in the moment when educational activity becomes conscious of itself as a distinct practice, it exists in the realm of language. It is only because of this prerational linguistic character that educational theory as a specific sort of reflection and language is able to locate educational practice. Because it is always prior to reflection and theorizing, based on previous reflection but never reducible to it, this practice retains a dignity of its own. By taking up such prerational notions and analyzing and newly

synthesizing them, theory offers a conceptual framework, a map of notions that allows practice to be seen in a new light. As nature and reason (realism and idealism, practice and theory) are completely unified only in the ideal—whose attainment is the goal of all rationality—every theory (and therefore also every practice) is only a momentary glimpse of what is or could be. There is no universally valid theory of education. Instead, theory is oriented to the evolving meaning of the “highest good” that shapes educational practice (Schleiermacher, 2002, 2003).

Theory of Education

Schleiermacher tends to describe and analyze the world in terms of dialectical processes, and his analysis of education is no exception. To him, humankind—and life in general—is defined by the two modes of spontaneity and receptivity. Growing up is therefore shaped by two unavoidable, countervailing movements: (1) the process of development and formation of the subject that occurs through the self and proceeds along the lines inscribed in its nature (which Schleiermacher refers to as *Bildung*) and (2) the developmental process of the subject motivated by external influences exerted on the younger generation by the older, which seeks to maintain existing cultural achievements and hopes and to perpetuate that which is regarded as important and worth passing on. The very question of what the older generation expects from the younger is central to Schleiermacher. This prereflective social reality serves as the starting point for Schleiermacher's interpretation of educational practice and enables him to situate education within the broader complex of social problems.

This results in a unique and, indeed, revolutionary approach toward education that, in modern terms, would be called *sociological*. Previously, the pedagogical relation was not regarded as being one of successive generations within a complex society but was seen as arising between two individuals—teacher and student, educator and *educandus* (prominently featured in Rousseau's *Emile*, a text paradigmatic for German discussions about education during the Enlightenment). For Schleiermacher, pedagogy—or *Erziehung*—is therefore placed within the tensions resulting from the differing volitions of a person engaged with his or her own development (the process of *Bildung*) and the society in which he or she is immersed—a context in

which one's identity, nevertheless, needs to be realized. And although *Erziehung* as a social practice represents the voice of the universal, in the face of the child's particularity, society can only mediate between the developmental processes of the self and the goals of development presented externally.

As the development of the individual is the effective realization of the ongoing integration of nature and reason, education should not work to eliminate individuality (here Schleiermacher moves decisively beyond prevalent educational beliefs and practice). The educator has to take into account the self-formation process of the *educandus* and is expected to frame this formation without alienating the individual from himself or herself. Hence, educational practice is actualized in a relation of educator and *educandus* that prioritizes the self-formation of the child or student. According to Schleiermacher, education is consequently based on three operations: (1) protecting (*Behüten*)—preservation of what's there already in the child, (2) supporting (*Unterstützen*)—encouraging what seems to be in keeping with society's expectations, and (3) counteracting (*Entgegenwirken*)—discouraging what seems in disagreement with society's expectations. Consequently, the final result of the educational process remains open: Based on the cooperation of educator and *educandus* and on the specific interpretation of a given situation (hermeneutics), education is a delicate balancing act, one of mutual negotiation, rather than a technology for the reproduction of society or the fabrication of citizens or employees. Education cannot be about breaking the individual's developmental course, but it is about the possibility of guiding it. This is something that is realized through external conditions of the process of self-formation on both smaller (family) and larger (social) scales.

Although Schleiermacher's work did not result in the creation of a specific school of thought, his ideas became influential for educational practice and theory, at least within the northern Continental European tradition of education. Teacher education in Germany has benefited from his contributions, and his theoretical insights have long served as an impetus for the development of theories and philosophies of education.

Karsten Kenklies

See also *Bildung*; Hegel, Georg Wilhelm Friedrich; Herbart, Johann F.; Hermeneutics; Rousseau, Jean-Jacques

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SCHOOL AND CLASSROOM CLIMATE

The climate of any organization consists of the quality and character of life within it. It encompasses the unwritten rules, standards, and expectations that affect the behavior of individuals within the organization, and it also includes its social milieu, implicit values, and physical environment. School climate, sometimes referred to as the heart and soul of a school, has long been considered fundamental to effective education, being a product of the shared beliefs, values, and attitudes that shape interactions between the students, teachers, and administrators. When judged to be positive, school climate is strongly related to learning and especially to the social impact of schooling. It influences not only academic achievement but also teacher morale, student and parent satisfaction, and other important outcomes, such as students' emotion regulation skills

and mental health, and reduced antisocial behavior, bullying, and dropout rates.

School climate encompasses buildingwide conditions influenced by leadership and management styles over time, such as the academic year. District-level analyses have proved less fruitful, although progressive policies, community resources, and economic conditions influence school climate. Similarly, classroom climate is shaped by the overall school climate, but it can be considered as a separate construct, especially at the elementary (primary) and middle (intermediate) school levels. Here, climate is more directly a function of how one teacher manages the social and emotional setting of the classroom on a day-to-day basis.

School Climate

To those working in or even visiting a school, its climate is recognized relatively easily. But because it is not a material entity, it has been difficult to define precisely. Nevertheless, there now exists a considerable body of literature reflecting a variety of well-developed psychometric measures. These instruments typically ask students to rate their perceptions of the support they receive from teachers (e.g., *Adults in my school care about me and how well I do academically*), student–student relationships (e.g., *Students in this school respect each other*), dimensions related to fairness and autonomy (e.g., *My opinions are respected*), and the overall sense of acceptance and belonging (e.g., *My school is a good place to be*). Among the many available questionnaires, a useful brief measure is the Delaware School Climate Survey, developed by George Bear and his colleagues.

Based on such measures, there are well-documented associations between positive school climate and academic achievement, effective violence prevention, student prosocial development, and teacher retention. Even subtler forms of discrimination, such as homophobic bullying and teasing, can be reduced by promoting a positive school climate.

Much of the published research has taken place within the United States, but an increasing number of studies from around the world have demonstrated that a positive school climate can even have moderating effects on exposure to toxic influences such as community violence. Other reported benefits of a positive school climate have been in reducing adolescents' levels of depression and raising self-esteem—gains found in Chinese, British, and Australian as

well as American high schools. Studies conducted in more collectivist cultures suggest that positive social relationships within the school are better predictors of student feelings of safety and belonging than any other environmental factor, including socioeconomic privilege. Fostering a school climate that is supportive of multiculturalism has been shown to improve students' empathy toward peers from ethnic minority groups.

What Influences School Climate?

It is widely acknowledged that the school principal and the senior leadership team are responsible for the climate of a school. Consistent management practices and cooperative discipline improve school climate, as does schoolwide positive behavior support. When students report negative climate conditions, they often identify disruptive behavior and lack of transparent discipline strategies as causes. If a principal is interested in schoolwide reform, he or she needs to pay close attention to the existing culture. This might include examining teacher relationships, including all teachers in decision making, and implementing policies that influence whether parents and families are accepted as a recognized part of the school community. A principal's willingness to encourage and promote learning, support the teaching faculty, reward dedication to teaching, articulate goals that are shared by all, and ensure fair distribution of resources has been shown to be related to teacher job satisfaction, which is then reflected in teachers' attitudes to the students.

Classroom Climate

Most of the research on educational climate has concentrated on the school as an organization; however, each individual classroom (most notably at the elementary school level) has a unique microclimate of its own. This is because of the highly significant influence on students of having a single teacher all year long, which of course heightens the impact of his or her teaching style, disciplinary tactics, and emotional intelligence. In fact, classroom-level factors can account for more variance in students' perceptions of climate than factors at the school level. Younger children's feeling of school connectedness is a direct function of their perception of acceptance by their classroom teacher. Teachers at the elementary level have a major role in combating low levels of bullying, such as being teased, being called names, or being left out of activities by peers on purpose. Teachers' skills in settling classroom conflicts in a fair manner are very salient even to young children.

As a result, most of our understanding of classroom climate comes from careful observation of teacher behavior and pedagogical style. That teacher affect and manner of teaching can be separated is illustrated by the idea that effective teachers are "warm demanders"—they have high expectations of children's learning and are strict in maintaining academic standards, but they do so in a way that is perceived by children as warm, supportive, encouraging, and respectful. Children of this age often comment about a teacher they really like that "she/he understands us" and "she/he can share a joke and laughs with us kids."

The classroom climate construct has been divided into at least four important domains:

1. Learning as exciting or imaginative (My teacher is always trying out exciting ways of doing things)
2. The instructional context (Most of my class days are well planned by my teacher)
3. The regulatory or disciplinary context (My teacher discusses with us why the school has certain rules and why they are important)
4. The interpersonal context (My teacher is interested in the personal problems of students and shares her or his own experiences)

Thus, classroom climate can be separated into three areas: (1) instructional style, (2) disciplinary style, and (3) emotional relationships. In all three, the complication is that any one approach is not inevitably suitable for all children, so that flexibility and respect for student differences become critical elements of a positive classroom climate.

The three areas are interrelated: The quality of the emotional relationship between teacher and student affects the manner in which learning opportunities and the imposition of discipline are interpreted and responded to emotionally by young students. For example, when students have a positive relationship with their class teacher, they are motivated to follow instructions, to communicate distress rather than act out, to engage in the current learning activity, to accept negative feedback, and to feel rewarded by praise and approval.

How Can Emotional Relationships Be Fostered?

If classroom climate is largely a function of the emotional relationship between a single teacher and a very diverse group of individual children, how can

such complex relationships be managed? Teachers cannot be expected to like all of their pupils equally, so in professional development it is necessary to emphasize the importance of fairness, of not showing favoritism, and being visibly accepting of individual differences in ability, learning styles, and cultural mores. The requirements are similar to the concept of emotional intelligence: Teachers' skills might include the ability to regulate their own emotions and manage their own stress.

A second skill domain is similar to that of the emotionally competent parent, who sees a child's emotional expression as a teachable moment—an opportunity to validate the child's feelings, normalize them in some way, and suggest ways of coping or dealing with negative feelings and sustaining positive ones. Called “emotion coaching,” a student's negative or distressed affect can be an opportunity for increased intimacy and sharing of past experiences through emotion talk. Finally, teachers' contribution to classroom climate requires them to have emotional boundaries and standards. These include fairness, respect, availability, belief in students, avoidance of overinvolvement, willingness to set limits, refraining from manipulative or harsh control strategies, and developing calming and consistent routines and structures. Students immediately recognize when a teacher loves teaching.

In conclusion, as Jonathan Cohen has argued so cogently, school and classroom climate encapsulates such important elements of education that these concepts represent exciting new ways of thinking about the interpersonal attributes to be promoted in teacher training, as well as being a critical new frontier for improving social and emotional outcomes for all students.

Ian M. Evans

See also Positive Psychology and Education;
Socialization; Teaching, Concept and Models of

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SCHOOL CHOICE

Prior to the 1990s, most government-funded school systems in the developed countries operated on a model giving parents limited choice over where their children should attend. The most common arrangement was for government officials to allocate children to schools on the basis of their place of residence. Many systems allowed for some limited choice within that model; for example, the English system included schools run by religious organizations, and single-sex schools, into which parents could opt. Most systems allowed for choice beyond the government system: Private schools have always been an option in most countries for those willing and able to pay for them.

As early as 1955, the economist Milton Friedman proposed a radical alternative, removing the government entirely from allocation decisions. The underlying principle was that government schools are inefficient because they have no incentives to respond to any kind of consumer demand and so lack both the information and the motivation to educate children well. Parents are highly motivated to make choices that will benefit their children educationally and have better information about what their particular children need than governments possess. This entry describes school choice systems from around the world and then examines four objections to school choice. It concludes with a look at the impact of various forms of school choice on the development of student autonomy and equality of educational opportunity.

School Choice From a Global Perspective

Throughout the English-speaking world especially, but also in countries such as Chile and Sweden, government systems were reformed from the late 1980s on to accommodate much more parental choice than hitherto. England, Australia, and New Zealand all have well-articulated school choice programs in which every child is allocated to government schools partly in response to formal choices made by parents. The United States has a patchwork system, in which each of the following play a role:

Charter schools are directly government funded and regulated but operated by nonprofits, and they are required, when oversubscribed, to select applicants randomly.

Voucher schools are operated by private entities and are funded on a per-pupil basis with government money, and regulations vary considerably by state.

Public choice systems operate within, or sometimes across, districts, and parents choose among schools, usually only when there is spare capacity after all local children who want to attend have been admitted.

In all the countries mentioned, private schools continue to provide non-government-funded alternatives to the formal-choice networks.

The social scientific evidence concerning the effects of school choice is inconclusive about whether it improves the quality of schooling on average and, if so, how. Few reforms have been conducted in a fashion that allows for rigorous scientific evaluation. Where reforms have been countrywide (e.g., in England and New Zealand), they have typically been part of a package that includes enhanced centralized accountability systems. So it is difficult to attribute changes to one, rather than another, part of the package. Where reforms have been patchier, as in the United States, meaningful studies are more feasible.

Criticisms of School Choice

School choice attracts a number of distinct objections, and the remainder of the entry discusses these in turn.

Commodification of Education

First, some theorists object that formal school choice systems turn education into a commodity. The case for market allocation is strongest for those goods the provision of which we think should be based on people's existing preferences. But education shapes preferences, and the person being educated (the child) lacks any idea of what the end goal is of the good he or she is consuming. So, the argument goes, the markets are an inappropriate mode of provision for education. And school choice introduces markets into the provision process.

While education is, indeed, unlike most consumption goods in the way the objection assumes, it is inevitable that the markets will play some role in determining both what schooling is provided and

how children are allocated to schools. Teachers are allocated to schools according to market mechanisms, and who decides to become a teacher is responsive to labor market conditions. Many educational services (e.g., textbooks, technologies, supplies, and even curriculums) are purchased through markets, and monetary decisions have to be made about how much to spend on schooling relative to other goods. Even in a system of pure allocation by neighborhood, housing markets will play a role in allocating children to schools, as will the availability of a market in private schooling. Schooling cannot, in a capitalist society, be entirely insulated from commodification (McMurtry, 1991).

Privatization of Education

Second, some argue that school choice emphasizes the private over the public, or common, good (Walford, 1996). By inducing parents to make choices about where their children attend school, government encourages them to consider and pursue only the private, and not the public, benefits: those that will accrue to their children rather than those that accrue to society as a whole. This is an empirical matter on which little evidence exists. The qualitative evidence suggests that, indeed, when choosing schools parents think primarily about the good of their children. But we do not have rigorous studies comparing the pre- and postreform motivations of parents.

Nor is it clear what the observation that consumers focus on private benefits tells us about the production of public benefits. Friedman himself argues that most of the benefits of schooling are captured by the individual being educated, but he acknowledges that some of the benefits are social. He bases his case for government funding on the conjecture that leaving the extent of provision to private funding would lead to undersupply of the public benefits. Supporters of school choice argue that the improvements to provision wrought by the introduction of choice and the consequent elimination of inefficiencies enhance the public good despite parental focus on the private.

Excessive Parental Control of Education

A third objection is related to the impact on children of parental control over their education. The more power parents have over their children's schooling, the more capacity they have to shape their children's values and to shield them from undesired influences. Most theorists acknowledge that parents should have considerable latitude when

raising their children. Some argue this solely on the ground that children are raised better when parents have such control, whereas others argue that parents actually have a self-interested right to it. But there is considerable dispute over how much control parents should have and what exactly should limit it. Some critics argue that giving parents too much control over education enables them to impede the development of their children's capacity to reflect carefully about how to live their lives. Some argue that children have a right to become autonomous, regardless of their parents' preferences, and others hold that respecting other citizens appropriately requires exposure in childhood to a wide array of reasonable but conflicting conceptions of the good. Both these interests are jeopardized by school choice. (For an argument that children do not have a right to autonomy, see Galston, 1991; for arguments that they do, see Callan, 1997, Brighouse, 1998; and for a careful critique of Brighouse and Callan's conceptions of autonomy, see Burt, 2003.)

Inequalities of Educational Opportunity

A fourth objection concerns the distribution of educational opportunities. One effect of government support for schooling is the reduction of inequalities of opportunity. Advantage and disadvantage are transmitted from parent to child through various mechanisms—parenting styles, access to networks, financial support and assurance, and genetic endowment. To some extent, government-funded schooling reduces these effects, primarily by ensuring that the children of parents who are unable or unwilling to pay for the few hours a day of schooling that the state requires are nevertheless provided for. The primary concern about school choice within a government-funded system is that it will result in worse academic outcomes, and hence lower opportunities, for those children whose parents are least attentive to their schooling and those whose parents are least well-informed. This is a problem insofar as equal opportunity matters (Brighouse, 2000) and insofar as justice requires that we prioritize improving the prospects of the least advantaged over improving the prospects of others (Schouten, 2012).

Impact of School Choice on Autonomy and Equality

Suppose that the interest in autonomy and in prioritizing the educational prospects of the least advantaged (whether intrinsically or to reduce inequalities

of opportunity) are both very weighty concerns. How much weight the third and fourth objections have as criticisms of school choice depends on the details of the choice system under consideration and on what the alternatives are.

With respect to autonomy, consider the Milwaukee Parental Choice Program (MPCP). The participating schools are very lightly regulated with respect to the curriculum and the values that the school promotes. Most of the participating children attend Catholic schools, and most of the rest attend religious schools of a different denomination. Parents committed to undermining their children's prospective autonomy have the opportunity to use the vouchers to help them achieve that goal. Compared with the English government school choice system, the MPCP schools offer significantly less support for autonomy. Choice is much more pervasive within the English system, but all participating schools are regulated by a well-articulated national curriculum, which specifically includes both requirements and resources that are likely to promote autonomy. But when the MPCP schools are compared with respect to the choices actually available to parents of potential MPCP students, the situation is not so clear. Unlike the government schools in England, the public schools from which the children in the MPCP are drawn are secular and involve very little formal exposure to religious traditions and commitments. These schools are not subject to curricular requirements concerned with promoting autonomy and are also low-performing schools (hence the political pressure for the voucher system). Religious instruction is far from being the only threat to prospective autonomy—the materialistic commercial mainstream culture that pervades many government schools in the United States is at least as likely to undermine autonomy. The design of the MPCP is not autonomy supporting, but its schools may be no worse in that respect than the real alternatives. (See Levinson, 1999, for a related qualified defense of choice.)

Now consider the goal of benefiting the least advantaged students. Critics of school choice observe, rightly, that evidence indicates that parents from more educated and wealthier backgrounds are better equipped to make high-quality choices on behalf of their children. These critics worry about schools cherry-picking the easiest to teach students, who benefit from the effects of having peers from more educated and wealthier families, while students who are more difficult to teach are concentrated in

less popular schools, where it is harder to induce high-quality teachers to work and where different peer effects are present.

Again, the extent to which these phenomena harm the least advantaged depends on the details of the school choice program. A voucher system like that proposed by Friedman, in which the government simply subsidizes part of the cost of schooling, allows schools to select students, and requires parents to pay the remainder of the cost after the government subsidy would presumably work considerably to the disadvantage of the least advantaged.

However, voucher systems can be structured to avoid this effect. In the Netherlands, where almost all schools are private and funded through effective vouchers, the vouchers are progressive; considerably more money follows disadvantaged than advantaged students. In England, the funding formula is more opaque, but schools with high concentrations of disadvantaged students receive about double the per-pupil funding, and schools may select only according to publicly agreed-on criteria. Oversubscribed schools in the MPCP are required to choose among applicants by a lottery, limiting their ability to cherry-pick students; and the vouchers for the first two decades of the program were limited to low-income students. (For a major study of the first decade of the program, see Witte, 2000.)

Still, all three systems face the problem that better-educated and wealthier parents are better choosers. However, in the default (nonchoice) system, these are exactly the parents who already exercise choice through the housing market and by lobbying their children's schools for special programming. The relevant question when evaluating whether a choice system would be better for the less advantaged than a nonchoice system is not how much better more advantaged parents are as choosers than less advantaged parents but how much better *the state* is at making appropriate educational decisions than are less advantaged parents. The worse the schools attended by less advantaged students in the nonchoice system, the less likely it is that a school choice program will harm them.

Some degree of school choice is an inevitable feature of any system for allocating children to schools. Formal-choice schemes vary considerably in their design, some better and others worse suited to meeting the normative goals of schooling (for more detail, see Brighouse, 2008).

Harry Brighouse

See also Autonomy; Charter Schools; Children's Rights; Right to an Education; Rights: Children, Parents, and Community

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SCHOOLING IN THE UNITED STATES: HISTORICAL ANALYSES

Embedded within historical analyses of schooling in the United States are a variety of theoretical perspectives. There is broad agreement about the reasons for the founding of public school systems but considerable disagreement about the factors that have

shaped the evolving social role of these systems once set in motion. This entry examines theories about both stages of educational development, with special emphasis on the alternative understandings of the purposes and functions of schooling after the founding of the common school system in the mid-19th century.

In the U.S. context, to speak of theories of the history of schooling is perhaps oxymoronic. Unlike their European counterparts, American historians of education have an aversion to engagement with social theory, which arises from the strong Anglo-American tradition of empiricism. The tendency is to focus on the contingencies of time and place and let the story emerge from the data, free of theoretical framing. As a result, this review of theories of the history of schooling draws mostly from sources outside of history itself, in particular from sociology, economics, philosophy, and curriculum theory.

The consensus view is that public schools first arose in the American colonies almost entirely for religious reasons. This rationale emerged from a central tenet of Protestantism, that every Christian needed to have unmediated access to the Word of God, which in turn meant the ability to read the Bible. Communities had to establish schools in order to keep the faith. There was also a less elevated reason for individuals to pursue schooling: Learning to read, write, and figure was a matter of survival in the intensely commercial economy of British North America. But although the latter helps explain the extraordinarily high literacy rate in the colonies compared with the mother country, religion was what drove the establishment of the first public schools.

The common school movement in the second quarter of the 19th century established publicly funded and publicly controlled systems of community schools aimed at making primary education universal. In the consensus view, this happened almost entirely for political reasons. In historical accounts of the founding of universal systems of education in the United States and Europe, the core motivation was to support the creation of the modern nation-state. The idea was to bring people together into a community school, induct in them a sense of citizenship and a common set of useful skills, and lead them from the old world of patriarchal obligation to the modern world of individual achievement by freestanding citizens.

With the history of nearly 200 years of development after the launching of the common school systems in the United States, the consensus begins to

fray. One view of the purposes and functions of the system came to dominate and persisted over time, but this position has been open to challenge from a variety of perspectives. The view that has carried the greatest weight, in both academic and popular understandings of the history of schooling, is *meritocratic functionalism*, and the three main contending perspectives are *social reproduction theory*, *status competition theory*, and *postmodern theory*.

These theories of the development of schooling vary in the way they treat a series of fundamental tensions in the understanding of how schools work:

Socialization and selection: Schools serve both of these social functions. They socialize students, imbuing in them the desired social norms and values and giving them the knowledge and skill they need to play social roles effectively. They also select students, directing them toward particular forms of work and positions in the social hierarchy. Theories differ in the relative emphasis they give to these two functions and in the designation of which is cause and which is effect.

Consensus and conflict: Theories differ in the degree to which they see schools as a shared social construction or as an imposition by one group on another.

Function and agency: Theories also differ in the way they conceive the historical processes in the development of schooling. In the functionalist view, schools emerge organically to meet the broad institutional needs of society. In the agency view, school change happens through the actions of individual actors pursuing their own ends.

Substance and form: Some theories stress that the primary effects of schools arise from the substance of what they teach, but others stress that the impact of schooling arises less from the substance of learning than from the form of schooling.

Theoretical grounding: Finally, alternative theories of educational change tend to ground themselves in the work of different theorists. In particular, they tend to stress Émile Durkheim, Karl Marx, Max Weber, or Michel Foucault.

Meritocratic Functionalism (Socialization Leading to Selection, Consensus, Function, Substance: Durkheim). It is in the nature of dominant theories that, in the absence of explicit theoretical claims in an analysis, they become the default explanation. This is particularly salient for the case of American

work in the history of education, which avoids theorizing and thus often ends up inadvertently reinforcing the view embodied in meritocratic functionalism. It is also in the nature of dominant theories that they lack a clear label, since they do not seem to constitute a particular theoretical stance on a subject but simply represent what is. Often, meritocratic functionalism is called functionalist or modernization theory, but the proposed label is useful in capturing the theory's two key components.

According to this theory, schooling is functional in that it emerged to provide the full array of specialized skills and attitudes that are necessary for the efficient functioning of a complex modern society. In particular, drawing on economic theory, schools are seen as machines for the production of human capital—central for the development of the managerial economy and, increasingly, the knowledge economy. Schooling is also meritocratic in that it simultaneously emerged as a mechanism for allocating people to jobs (and thus social positions) based on their individual achievement in school. Schools thus constituted a major break point between traditional and modern societies by facilitating the shift from ascribed to achieved status. They offered individuals the opportunity to prove themselves on the level playing field of the classroom and then achieve social mobility according to their merit. Putting together the two elements—functionalism and meritocracy—the theory argues that schools allowed society to get what it needed and individuals to get what they deserved.

In general, historians and social scientists have not been arguing that the school system actually has been achieving both of these goals, only that the tendency has been in that direction. So for schools to be more functional, they have had to tailor teaching more closely to the needs of the modern economy; and for them to be more meritocratic, they have had to offset the ways in which the social position has shaped student performance. But the theory has trouble explaining important characteristics of the history of American schooling: Enrollments expanded long before school learning had economic utility, unequal social outcomes have persisted in spite of increased educational opportunity, and school systems emerged in a much more convoluted and inefficient form than the theory would have predicted.

Social Reproduction (Selection Leading to Differential Socialization, Conflict, Function/Agency, Substance: Marx). This theory challenges the claim

that the school system has become gradually more functional and meritocratic over time. The core argument is that selection has driven socialization in schools. Students' social origins have determined the quantity and quality of the schooling they have received, which in turn has channeled them into jobs that have left them largely where they started. Thus, schooling has served to reproduce social inequality. The driving force in the system has not been consensus but a conflict over the allocation of power, money, and prestige; and those who have started out high in these social goods have been able to work the system to their continuing advantage. Schools have functioned to preserve class power. Class systems historically have always sought to preserve privilege for those on top, but what has been distinctive about class reproduction in modern societies is that schools have served to legitimate this process of social reproduction. Schools have taken class advantage and, through a process of educational alchemy, turned it into individual merit. At the end of their school careers, students have emerged with a socially certified label—smart or dumb—which then explained their future social success or failure.

Since legitimating inequality has been the school's central social function, schools have had to establish a modicum of credibility for this claim by allowing some poor students to get ahead and some rich students to fail. So reproduction theory is able to accommodate much of the mixture of mobility and reproduction that has emerged from schooling. But the dominant form of this theory has some of the same problems as meritocratic functionalism. It assumes a system that seems to operate behind the backs of teachers, students, and parents; and it asserts against evidence that schools have been smoothly functional in preserving the system. Another strand of reproduction theory deals with the latter problem by stressing individual agency over social function to account for the amount of dysfunction and resistance that have emerged within the system.

Status Competition (Selection, Conflict, Agency, Form: Weber). Like reproduction theory, status competition theory challenges the idea that unequal outcomes of education are the result of differences in individual merit, but it differs by emphasizing the importance of school in shaping a person's location within a finely graded structure of social stratification rather than within a crudely graded system of social classes. From this perspective, schools emerged

in response to the positional demands of a variety of status groups rather than the human capital needs of society or the power needs of the dominant class.

This theory sees school systems as developing stratification not only by level (e.g., elementary, secondary, and tertiary) but also by the varying prestige of schools and the programs within schools at each level. Depending on level and prestige, schools and programs have come to teach different status cultures, which correspond to the cultures of particular status groups in the social hierarchy and particular workgroups in the occupational hierarchy. And schools have provided students with a form of cultural currency—grades, credits, and especially academic degrees—that they have been able to exchange for privileged access to social positions, with the most elevated, scarce, and prestigious credentials opening the doors to the highest positions. One form of the theory puts primary emphasis on the role of schools as credentialing institutions, where learning is at best a side effect. The primary strength of this theory is in explaining why school enrollment growth preceded the economic demand for skilled workers and why credential requirements for jobs rose so quickly. A central weakness is the difficulty in explaining why employers and policymakers have been willing to play along with this costly and socially irrational game.

Postmodernism (Socialization/Selection, Conflict, Disciplinary Power, Form as Substance: Foucault). Whereas the first three theories focus on the role of schools in placing students in varying locations in the modern social structure, postmodern theory looks at the role of schools in developing and maintaining a historically specific form of reason—a regime of truth—that has come to constitute modern society. The focus is on the discursive practices (formed in language and bounded by reason) that carry disciplinary power into all realms of social life. Schools have been central in purveying the social science disciplines that undergird this form of power, in constructing metrics (e.g., tests, grades, and degrees) for locating individuals on a normal curve of moral and social value, and in assigning and legitimizing the labels and social categories (smart/dumb, normal/abnormal, worthy/unworthy) that students have borne into adult life.

If other theories of the history of schooling tend to focus on educational inputs and outputs, postmodernism zeroes in on the practices of socialization and selection that are fundamental to the institution. It is

particularly adept at showing how schools emerged as the prototypical institutions for constructing modern societies, using language and behavioral science to shape the reasoning, conscience, and social identity of the young. But it is less effective in trying to explain how and why American schools developed over time in historically distinctive patterns.

David F. Labaree

See also Apple, Michael; Modernization Theory; Postmodernism

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SCHWAB, JOSEPH: THE PRACTICAL

Joseph Schwab (1909–1988) stands as one of the more important American educational and curriculum theorists of the second half of the 20th century. He made major contributions to the theory and practice of collegiate liberal education, science curricula, and religious and values education, and finally, as will be made clear in this entry, he made important contributions in the series of papers on the “practical,” where he outlined a reconceptualization of the metatheory of curriculum making and school improvement. All of his work was based on his experiences of curriculum making, and particularly on his experience in the undergraduate college of the University of Chicago between his first appointment as an instructor in biological sciences in 1937 and the effective end of the “Hutchins College” in 1959. It was in Chicago that he encountered Ralph Tyler (the college’s examiner), the philosopher Richard McKeon, and, through McKeon, John Dewey. Much of his work reflects their inspirations and concepts.

Thus, like McKeon and Dewey, Schwab argued that a curriculum should be grounded in the idea of

“faculties,” or “powers,” of the mind—in the capacity for a reasoned consideration of the ideas pervading the sciences, the culture, and the polity. His curriculum making always centered on the use and development of frameworks and resources (“arts”) to support teaching that was directed toward the development of such powers. Following McKeon, he introduced from classical rhetoric the idea of *topica*—“places” or “commonplaces” (from the Greek *topos*, “place”)—as necessary resources for the inventive activity that is curriculum making.

In his Inglis lecture at Harvard, Schwab introduced his commonplaces of subject, student, teacher, and milieu; these were coordinate topics that must necessarily be treated in any curriculum-making undertaking (Schwab, 1962, 1978d). In his Vietnam-era *College Curriculum and Student Protest* (Schwab, 1969), he drew on the commonplaces that he was to spell out later in his “The Practical: Translation Into Curriculum” (Schwab, 1978c)—privations and resources/potential. His essay “What Do Scientists Do?” (Schwab, 1978d) develops the commonplaces he used to frame the arts of reading scientific texts (the arts of recovery, hermeneutics) that were the hallmark of all of Schwab’s teaching. “The Practical: A Language for Curriculum” (Schwab, 1978b) is derived from the Aristotelian places of ends, subject matters, problems, and methods (“from what, to what, in what, how”).

The “Practical”

In his teaching on the natural sciences at Hutchins College, Schwab focused on the shifting starting points—that is, paradigms—used in the sciences as forms of doing that yielded knowledge of particular kinds. In addition, in his work developing the college’s capstone course, “Observation, Interpretation, Integration” (OII), he had deeply explored the idea of the arts of theory, practice, and production, congruent with the Aristotelian division of the sciences. Twenty years later, in *College Curriculum*, he pursued the idea of the “practical” and a curriculum for public policy making.

Drawing these ideas together, he opened his first practical paper with the famous declaration that “the field of curriculum is moribund, unable by its present methods and principles to continue its work and desperately in search of new and more effective principles and methods” (Schwab, 1978b, p. 287). The problem, he contended, was the domination of the field of curriculum studies (and educational theory

more generally) by the idea that there were theoretical principles that might frame its fundamental task of enhancement, or improvement, of schooling. He contended that this was an assumption that had been proven, by experience, to be untenable; in hindsight, it was possible to see that all educational theories were incomplete and/or partial in their coverage of their subject matters and were at best starting points that required application and adaption to the work of educating. Put another way, school improvement via curriculum making was an issue of decisions and choices about specific ends and means within institutions, courses, and so on. It necessarily embraces the commonplaces of subject, student, teacher, and milieu in ways appropriate to a specific place and time.

As Schwab saw it, the result of the unexamined preoccupation of the curriculum field with the “theoretic” was the transfer of the leadership of American schooling to fields other than curriculum. As a response to what he saw as this manifest crisis of the field, he contended that the field should renew itself and rebuild itself around a “practical” starting point or paradigm focused on decisions and choices toward improvement or enhancement in concrete situations. In the first practical paper, “Practical 1” (Schwab, 1978b), he ventured a sketch of such a reconceptualized curriculum field focusing on the end of decision, choice, and action. In the second part of the paper, and the later papers in the practical series (“Arts of Eclectic,” Schwab, 1978a; “Translation Into Curriculum,” Schwab, 1978c), he went on to develop a “practical” centered on one of his four topics—*methods*, that is, deliberation and the *arts* of the practical and the eclectic.

Conclusion

An appraisal of Schwab’s “practical” papers requires the recognition that the set of papers reflected his larger commitment to the idea of developing the powers of the mind, the intellectual cultures and practices of his Chicago milieu, and his commitment to the idea of thought and action around the improvement or enhancement of schooling. In the practical papers, Schwab sketched a way by which the institutionalized curriculum field could develop, or redevelop, a “power” to enhance and improve American schooling, which he believed it did not have by the 1960s—although the same could be said of educational theory and research more generally. But, as he developed the thesis of the papers, two different arguments

emerged: (1) one centering on the generalized (meta-) theoretical differences between the practical and the theoretical as starting points for curriculum, “Practical 1.1,” and (2) a specific attempt to work out the implications of that position in terms of the commonplace of *methods*, “Practical 1.2.” C. W. Wegener (1986) has criticized this second argument as requiring (a) a firm mapping onto the institution of the school and the school system and (b) an account of what the deliberations he outlines are about, a treatment of what *we* want to do as well as a treatment of how *we* might do it. He contends that both of these necessary steps are missing from “Practical 1.2.”

But such disputes do not bear on the contentions of “Practical 1.1,” with its central claim that the theoretic has not yielded a plausible basis for institutional action of the kind that might lead schooling and schools, and that theoretically based policy making for the “provinces” by what Schwab calls “Moscow” has likewise failed to yield sustained improvement on the ground. According to Schwab, such policy making all too often begins in mobilizations around bandwagons and necessarily seeks general solutions to specific, situated needs and problems. Amid claims that echo those of Schwab’s practical papers, these insights have also been acknowledged in other fields to yield, for example, “practical theology,” “real political science,” “phronetic social science,” “broken windows” approaches to policing, and so on. Many such sketches are, however, less well and less comprehensively developed than is Schwab’s practical.

However, although there are notable exceptions, the practical has not secured a firm foothold in curriculum studies or educational theory as a program of theory and research—as distinct from a basis for exhortation to do things differently. Instead, forms of the theoretic have achieved hegemony, with at times an explicit rejection of Schwab’s criterion of on-the-ground impact on schools as a framework for the evaluation of the health or otherwise of a paradigmatic framework. Curriculum studies have, it seems, passed the torch of improvement of schooling on to others.

Ian Westbury

See also Aristotle; Curriculum, Construction and Evaluation of; Dewey, John; Educational Research, Critiques of; Educational Science; Hermeneutics; Kuhn, Thomas S.; Phronesis (Practical Reason)

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SCIENCE STUDIES

See Actor–Network Theory: Bruno Latour; Edinburgh School of Sociology of Knowledge

SELF-REGULATED LEARNING

Self-regulated learning refers to processes that mentally and physically active learners use to activate and sustain cognition, affect, and behavior to attain

their goals. Self-regulation has been a recurring topic in theoretical and philosophical discussions of learning and instruction—antedating the rise of formal research. This entry will discuss the construct in terms of its historical background, the formative psychological research that has been carried out on it, and its implications for educational practice.

Historical Background

Consider the task of writing. Perusal of the biographies and autobiographies of successful writers reveals many examples of self-regulative efforts that are designed to improve their writing. For example, Benjamin Franklin described setting his personal goals and recording his daily progress in a ledger. To enhance the quality of his writing, he selected exemplary passages written by favored writers, and after extracting a list of key points, he rewrote the passage and compared the result with the original. He recorded areas in need of improvement in his ledger, as well as his subsequent success in correcting them. Although his formal education ended in elementary school, Franklin authored one of the most successful books in colonial America, *Poor Richard's Almanac*.

Other prominent writers, such as Ernest Hemingway, Victor Hugo, and Anthony Trollope, also relied on self-regulatory methods. Hemingway and Trollope kept quantitative records of daily written output to increase their motivation, whereas Hugo set creative contingencies to motivate himself to stay focused on the task, such as giving his clothing to his valet to be returned only when he reached his literary goal for the day. Although nudity is certainly an unorthodox method of self-control, Hugo found it effective in overcoming competing sources of attraction, such as the allure of a nearby tavern!

The key features that define self-regulated learning can be discerned in these anecdotal accounts of writing. Setting challenging qualitative or quantitative goals for one's efforts is essential, because they serve as reference points to chart one's progress. In more technical terms, goals enable learners to create self-oriented feedback loops to monitor their effectiveness and to improve their functioning. To respond adaptively to personal feedback, learners also need to control adverse cognitions, emotions, and environments (e.g., Hugo's creation of a conducive environment for writing). Setting challenging goals and sustaining self-regulatory efforts on demanding tasks requires learners to develop not only effective learning strategies but also supportive motivational beliefs.

Formative Psychological Research

Initial research on self-regulation of learning in the 1970s focused on separate self-regulatory processes, such as goal setting, self-efficacy, self-instruction, strategy learning, and self-management, with limited consideration for the implications regarding academic functioning in tasks such as mathematics or writing. During the mid-1980s, a number of researchers began to formulate nascent self-regulatory accounts of academic learning.

By the early 1990s, a number of efforts to adapt extant theories to explain self-regulated learning were published in special journal issues and edited textbooks. These theories included operant, social cognitive, volitional, phenomenological, and developmental stage accounts. These theoretical accounts of academic learning, which included motivational and self-control as well as metacognitive aspects of self-regulation, generated considerable research. A number of edited texts were published by the mid-1990s capturing the results of this first wave of descriptive research and experimental studies of self-regulated learning. By the end of the 1990s, the impressive outcomes of this empirical research led to pedagogical applications designed to enhance students' self-regulated learning. The results of these educational interventions were published in major journals and widely cited textbooks.

After the turn of the 21st century, a number of comprehensive accounts of self-regulation emerged that integrated metacognitive, motivational, and behavioral components in sufficient detail that they could be tested in instructional interventions. The authors of these accounts were Allyson Hadwin and Philip Winne, Paul Pintrich, and Barry Zimmerman. Although each account includes unique components, there is broad consensus on general phases, processes, and constructs. Rather than summarize these areas of agreement, the discussion will focus instead on Zimmerman's account, which like Pintrich's model involves multiple phases and like Hadwin and Winne's model involves cyclical feedback loops. Both Pintrich's and Zimmerman's accounts stemmed from social cognitive theoretical origins.

A Comprehensive Account of Self-Regulation

From Zimmerman's vantage point, learning involves processes that students use to initiate and sustain their quest for knowledge and skill. These proactive efforts to self-regulate their learning have been analyzed in terms of the three phases of a cyclical network (see Figure 1).

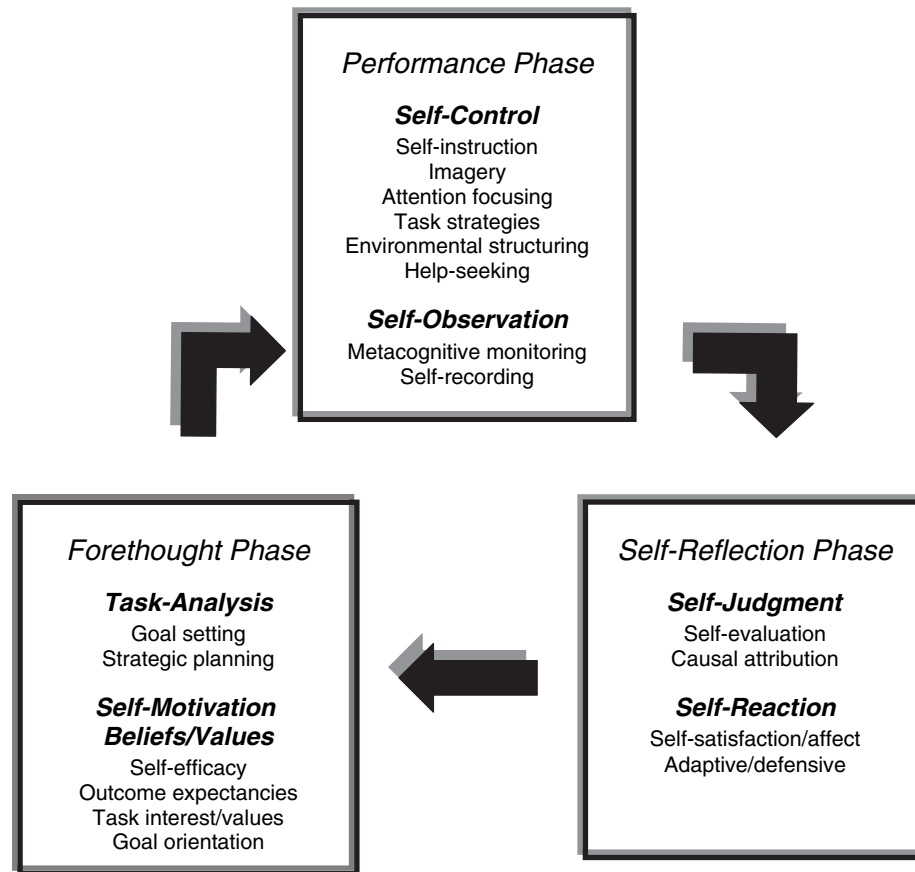


Figure 1 Motivating Self-Regulated Problem Solvers

Source: Zimmerman and Campillo (2003, p. 239). Copyright 2003 by Cambridge University Press. Reprinted with permission of the authors.

Forethought phase processes precede efforts to learn and prepare the way for them. These processes involve task analysis skills and self-motivational beliefs. During a subsequent *performance phase*, self-regulatory processes are designed to enhance ongoing efforts to learn, such as use of self-control strategies and self-observation processes. This second phase is followed by a *self-reflection phase*, involving processes that follow efforts to learn and enhance understanding of the implications of one's outcomes. These Phase 3 processes involve self-judgments and self-reactive processes. When unfortunate experiences trigger negative self-judgments and self-reactions, they undermine the self-motivation that is necessary to continue cyclical efforts to learn.

According to this multiphase account of learning, two distinctive cyclical patterns of self-regulatory processes have been identified: *Proactive* learners are distinguished by the high quality of their forethought and performance phase processes, whereas *reactive* learners rely on postperformance self-reflections to

learn, but this a posteriori focus has been found to decrease these learners' effectiveness. All students seeking to succeed self-regulate in some manner, but those who are proactive have a qualitative edge over merely reactive students.

More specifically, during the forethought phase, proactive learners engage in superior *goal setting* and *planning*. They set specific, proximal, and challenging goals for themselves because of their superior task-analytic skills. In contrast, reactive students set vague, distal, or unchallenging goals for themselves because of their superficial task analyses. Furthermore, proactive students plan strategies to aid cognition, control affect, and direct motor execution. By contrast, the superficial task analyses of reactive learners preclude them from selecting a detailed strategy and compel them to rely on vague self-exhortations to try harder or concentrate more.

Because task analysis, goal setting, and strategic planning require personal initiative and persistence, they involve a high level of key self-regulatory

motives. Proactive learners are motivated by higher *self-efficacy beliefs*, greater *outcome expectancies*, adoption of *mastery learning goals*, and greater *task interest/valuing*. Self-efficacy refers to a task-specific measure of self-confidence. By contrast, reactive learners rely on inferior forms of motivation and as a result are less self-motivated to analyze tasks, select goals, or plan strategically than proactive learners.

During the performance phase, proactive learners engage in self-control processes that were planned during the forethought phase, such as *self-instruction*, *imagery*, *attention focusing*, *task strategies*, *environmental structuring*, and *help seeking*. By contrast, reactive learners engage in learning tasks without an explicit strategy for guidance. Furthermore, proactive learners rely on systematic forms of self-observation to guide their efforts toward self-control, such as *metacognitive monitoring* and *self-recording*. The former refers to mental tracking, and the latter refers to physical tracking of one's performance and/or outcomes. By contrast, reactive learners find it difficult to track a particular process because they lack specific forethought phase goals or strategic plans to focus their attention. Instead, they tend to focus on outcomes.

Because proactive learners are guided by specific forethought phase goals, they tend to *self-evaluate* their performance based on their mastery of those goals during the self-reflection phase. Since reactive students lack specific forethought goals, they often fail to self-evaluate, or if they do so, they resort to social comparison with classmates to judge their personal effectiveness, which can lead to disadvantageous *causal attributions*. Reactive learners often self-evaluate using the grades of others as a benchmark for comparison, and they have a propensity to attribute any comparatively low performance lack of ability, which is classified as an uncontrollable cause. Proactive students self-evaluate based on self-chosen goals, and as a result, they typically attribute errors to ineffective strategies, which are classified as controllable causes. Regarding their self-reactions, proactive students will pursue courses of action that result in satisfaction and positive affect and will avoid courses that produce dissatisfaction and negative affect. In contrast, reactive learners' attribution of errors to uncontrollable causes, such as lack of ability, leads them to feel dissatisfied, and this in turn discourages them from further efforts to learn.

A second form of self-reaction involves adaptive or defensive inferences. These inferences refer to a person's need to alter his or her approach during

subsequent efforts to learn. Proactive students make *adaptive inferences* when faced with errors (e.g., seeking a more effective strategy), due to their favorable attributions and high level of self-satisfaction; reactive students turn to *defensive inferences* to protect themselves from future dissatisfaction and aversive affect (strategies such as feelings of helplessness, delay, task avoidance, cognitive disengagement, and apathy), because of their unfavorable attributions and low level of satisfaction.

These self-reactions are postulated to influence forethought processes regarding further efforts to learn. Proactive learners' high levels of self-satisfaction are expected to enhance various forms of self-motivation to continue cyclical efforts to learn, whereas reactive learners' low level of satisfaction will discourage subsequent efforts. Advantageous adaptive inferences by proactive learners are expected to lead to improved strategic planning and to shifts in goals when necessary. By contrast, reactive learners' defensive reactions will undercut further attempts to learn. Thus, cyclical self-regulatory phase processes provide an inclusive explanation for both the persistence and sense of personal fulfillment of proactive students and the self-doubts and avoidance of reactive students.

Implications for Educational Practice

Different forms of instruction vary considerably in the frequency and specificity of the type of feedback they provide. The quality and quantity of feedback are keys to the size of self-regulatory improvements in functioning over successive cycles of learning. For example, classroom lectures provide little student feedback unless the teacher seeks answers directly from students or gives frequent quizzes. By contrast, computerized instruction can be designed to provide frequent feedback to questions that follow relatively brief text passages, and this advantageous property has led to a number of significant software interventions, such as those by Roger Azevedo or by Winne. When the quality or quantity of external instruction or instructional feedback is poor, proactive students rely on covert processes, such as goal setting, strategic planning, self-monitoring, and self-evaluation.

Consider college students in a traditional lecture course who receive two tests: a midterm and a final exam. Proactive self-regulatory students will set daily reading goals, highlight key terms, outline the narrative, quiz themselves at regular intervals, and keep records of successes, failures, and self-corrections.

Proactive students will often use study partners to compare notes (a form of modeling) and to test each other (social feedback). There is evidence that coping models that progressively eliminate errors are more effective than mastery models that perform flawlessly. Areas of unresolved difficulty would lead proactive learners to meet with the instructor to receive tutoring (a form of help seeking). Each of these self-regulatory processes is designed to make the learner more aware of his or her competence on the task at hand and of ways to improve it. By contrast, reactive learners do not set daily goals or experience feedback at a point when it is maximally helpful. Such students initially judge their progress favorably, until they receive adverse results from the midterm exam. There is now extensive evidence that students who engage in proactive processes not only learn better than students who rely on reactive processes, they are also more motivated and more likely to respond to feedback regarding errors in an adaptive way.

In describing mentally and physically active learners, John Dewey recognized the benefits of cyclical forms of self-regulated learning long before these terms were used scientifically. He commented in "Analysis of Reflective Thinking" that failure is instructive: "The person who really thinks learns quite as much from his failures as from his successes" (Dewey, 1934/1998, p. 142). Researchers who study self-regulated learning can now describe in detail what "really thinks" means.

Barry J. Zimmerman

See also Learning, Theories of; Metacognition; Motivation; Social Cognitive Theory

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SEMIOTICS

At its most fundamental level, semiotics is the study of the meaning of signs, that is, how individual units (e.g., words, signs, symbols, discrete actions, etc.) come to have meaning and how specific meanings come to be assigned to different representational units. This most basic definition tends to suggest a linguistic focus, which is actually a product of the American branch of semiotics, influenced by Charles S. Peirce. However, as a study of signs, symbols, and signification, semiotics is applicable not only to language and linguistics but also to any field wherein the analysis of meaning production is relevant. This broader focus is the purview of European semiotics and the Paris School of Semiotics (École de Paris). Apart from Pierce, other influential scholars in the early development of semiotics are Charles William Morris, Roland Barthes, Algirdas Greimas, Yuri Lotman, Umberto Eco, and Julia Kristeva. Among the linguists, other than Ferdinand de Saussure, are Louis Hjelmslev and Roman Jakobson; proponents of structuralism are de Saussure, Claude Lévi-Strauss, and Jacques Lacan. This entry gives an overview of the major approaches to semiotics and sketches some of their relevance for education.

American Semiotics

Peirce (1839–1914) was a scientist and philosopher who was one of John Dewey's teachers. He had a great interest in logic and the production of meaning,

which eventually led him to theorize on the presence and utility of signs and symbols in all aspects of life. The American branch of semiotics owes a great deal to Peirce's philosophy, in particular his sign categories; his work centers on communication, which gives it a more linguistic bent than European semiotics.

Linguistic semiotics has three branches: semantics, syntactics, and pragmatics. Semantics involves the relation between signs and their referents, for instance, an object or action and the word used to represent it. It functions at the level of individual words or phrases, exploring how a word comes to mean what it means. For example, how is it that the word *apple*, instead of the word *dog*, has come to represent a category of round, sweet, crunchy fruit that grows on trees?

Syntactics, on the other hand, focuses more on the formal properties of signs and symbols in interaction with each other. It studies the meanings of signs in relation to other signs within a formal structure, that is, how any one word relates to, or influences and is influenced by, the other words in a sentence or paragraph. For example, "Mary gives Fred a book" contains the same signs as "Fred gives Mary a book," but the sequence of those signs changes the meaning significantly.

Finally, pragmatics is the study of the interaction between signs and the agents producing them, that is, how meaning is influenced by the person or thing manipulating the signs, and its intentions in producing them. For instance, when Mary says, "Brrr, I'm cold," it could be simply a statement of fact, or it could be a hint to Fred to offer to close the window or lend her a sweater. But Fred, likewise, may interpret it as either a statement of fact or a request, thus affecting the outcome of the exchange. These multiple layers of intentions and interpretations are what pragmatics studies.

The École de Paris and European Semiotics

While American semiotics focuses more narrowly on the linguistic applications of semiotics, European semiotics applies it across a wider range of fields. This broader-based approach posits universal structures that may then be represented by different signs, symbols, or icons in different disciplines. In short, European semiotics explores the generation of meaning in all forms and fields, from the hard sciences to social practices. Eco, an internationally known semiotician, proposes that every cultural manifestation can be studied as communication. When one considers

that semiotics can include the study of any field that ascribes signification or meaning to anything, one can easily see how its use could be pertinent to fields ranging from arts and literature to anthropology and mass media, covering all the social and biological sciences in between.

Semiotics and Education

Given its emphasis on the interpretation of signs and symbols, it is no surprise that semiotics is particularly relevant to pedagogy. Semiotics in education has two strands. The first deals with the teaching of semiotics as a school subject; the second strand employs semiotics for the purpose of understanding education, studying educational interactions as a kind of semiosis (Nöth, 1990).

Teaching is a special form of communication that seeks to convey meaning through signs, and learning is the converse of that: developing an ability to interpret signs and their meanings. On the one hand, semiotics can offer analytical tools for teachers to use in conveying their messages more effectively to students; on the other, learning about signs and symbols and their interpretation helps learners develop their cognitive abilities.

This is another field of study in which Peirce's theories had significant influence. For example, his method of abductive reasoning, or drawing inferences regarding the most reasonable explanation for an observed circumstance, is very useful in the classroom. This is also related to one of his theories of pragmatism, which posits the importance of experience in learning, whose influence can be clearly seen in the growth of experiential learning curricula in recent decades.

The second strand is better developed, mainly because educational theorists have found semiotics and semiosis to be useful for theory development in multimodal theory (e.g., Kress, 2010), for instance, discourse analysis (e.g., Prior, Hengst, Roozen, & Shipka, 2006; Scollon, 2001). Stables and Gough (2006) have proposed that living and learning are acts of constant semiosis and should be studied from a nonrealist perspective that eschews distinctions between mind and matter or sign and signal (signal being the version of the sign that is attributed to nonhuman actors).

The interdisciplinary and complex field of semiotics, however, has not given education much attention, with some notable exceptions, such as a special issue of *The American Journal of Semiotics*

(Volume 5, Cunningham, 1987). The study of semiosis in teaching, learning, curriculum, and educational policy has not been considered by many semioticians to be a significant aspect of the field (Cunningham, 1987). Major theorists who have had a significant influence on educational theory and semiotics have been drawn from linguistics (de Saussure), literary theory (Mikhail Bakhtin), psychology (Lev Vygotsky), sociology (Pierre Bourdieu), linguistic and cultural anthropology (William Hanks), and philosophy (Peirce). In this sense, semiotics of education is as diverse and as interdisciplinary as the field of semiotics itself.

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Beth Lewis Samuelson

See also Mead, George Herbert; Vygotsky, Lev;
Wittgenstein, Ludwig

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practice service-learning have goals for students that include the following: academic and moral or character development, civic education and citizenship development, and skill building in areas that range from the arts and humanities to science and technology. Whatever their goals for students, practitioners also share a common commitment to partnership with and service to community organizations and residents. Students' learning and development must come through, and as a result of, their community engagement and not at its expense. Unheard of before the late 1960s, service-learning is now established and widely utilized in K–12 schools and colleges and universities worldwide. This entry traces the development of service-learning, outlining its theoretical foundations and varieties of practice, and notes some issues related to how it should be institutionalized.

Service-learning's earliest definition, the accomplishment of tasks that meet genuine human needs in combination with conscious educational growth, was first articulated in the late 1960s. Early practitioners called for structured opportunities for critical reflection as essential elements in volunteer service programs, so that students could learn from their experience, strengthen the impact of their work, and consider the broader social structures that present the problems they respond to as volunteers. For example, service-learning should not just enable students to volunteer in and learn about soup kitchens. It should also ask them to reflect on why people are hungry and what can be done about it—as individuals, as communities, and as a society.

Some service-learning advocates differentiate their practice from volunteer service in an additional way, questioning the nature of the service act itself and evoking a concept of reciprocity between server and served. Such an exchange helps avoid a paternalistic, one-way approach to service in which some people have resources, which they share charitably with others who are lacking in them.

Service-learning practitioners make their pedagogical home in the field of experiential education. They invoke the theories of established education scholars to explain the pedagogical foundations of their practice. For example, many structure their programs on David Kolb's cycle of experiential learning—action combined with critical reflection, conceptualization, and active experimentation with analyses—seeking to enable students to reconstruct their experience and question old ideas while acquiring skills in learning experientially. The goal is learning that transforms students, both increasing and

SERVICE-LEARNING

Service-learning is a pedagogy that connects voluntary community action, and efforts to learn from that action, with existing knowledge. Those who

revising their knowledge and altering their perceptions and interpretations of the world. The pedagogical challenge is to devise ways to connect study and service so that existing knowledge illuminates and informs students' experience and to ensure that experience lends meaning and energy to, and perhaps stimulates a reformulation of, that knowledge.

Service-learning thus expresses a values-oriented philosophy of experiential learning that is integrated with its activist orientation toward society. It is an approach to experiential learning, an expression of values—service to others, community development and empowerment, reciprocal learning—that determines the purpose, nature, and process of social and educational exchange between learners and the people they are serving, and between the academy and community organizations with which service-learning works.

Until the late 1980s, service-learning held a small, marginal position within education. However, with the boost provided to active learning pedagogies by education reform movements, and to volunteerism by public calls for community engagement, programs began to proliferate. The Corporation for National and Community Service in the United States provided a major infusion of funding to secondary schools, colleges, and universities to establish programs and curricula. Principles of good practice were established. What was once a not well-known (or understood) form of alternative education was suddenly gaining attention from education policymakers, professional organizations, and ever-growing numbers of campus administrators, faculty, and students.

This proliferation was soon followed by growing numbers of scholars interested in researching service-learning to ascertain its outcomes and strengthen its theoretical underpinning. A project at Vanderbilt University funded by the Fund for the Improvement of Postsecondary Education led to the publication of one of the most influential books in the field, *Where's the Learning in Service-Learning*, which provided the basic foundation of evidence that service-learning has multiple student impacts on everything, from their academic knowledge and critical thinking to civic awareness and development of interpersonal skills and abilities. *The Michigan Journal for Community Service Learning* was established in 1994 and has become a premier publication for service-learning research.

With their pedagogy more firmly entrenched, practitioners began to return their attention to the community, placing increased emphasis on

community partnerships as the basis for ensuring both program development and sustainability on campus and positive impact in the community. In this century, service-learning has taken off internationally both through North American schools and universities sending their students overseas and the rise of domestic and international service-learning in Africa, Asia, and South America.

In addition, a new discussion has erupted in the field related to how best to institutionalize service-learning within education institutions. Should the central aim be to build service-learning into the disciplines? Or is it inherently interdisciplinary? Should service-learning and other forms of engaged scholarship ultimately be given academic homes of their own and allowed to evolve into discrete fields, such as feminist and ethnic studies? Ultimately, these questions lead to a consideration of knowledge itself. As service-learning becomes more mainstream, it asks us to reconsider what knowledge is legitimate in the academy.

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See also Character Development; Citizenship and Civic Education; Democratic Theory of Education; Dewey, John; Experiential Learning; Problem-Based Learning; Reflective Practice; Donald Schön

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SEXUAL ORIENTATION AND GENDER IDENTITY

Philosophy of education's emphasis on applied ethics, conceptions of identity, and political critique, together with interdisciplinary interest in gender

studies and poststructuralism, has stimulated interest in gender and sexual minority issues. This inclusion has both marked out the difference of such minority identities as well as shown the implications of narrow norms of gender and sexual identity for all people. Work in philosophy of education has included examinations of the particular experiences and theories behind lesbian, gay, bisexual, transgender, and/or queer (LGBTQ) identity. Via queer theory, gay liberation, and lesbian feminist texts, it has also shown how gender and sexual norms define the experiences of those in minority and majority social positions. This entry outlines the work that is being done and the educationally relevant insights that have been gleaned in this rapidly expanding field.

Sexual orientation, that is, lesbian, gay, and/or bisexual identity, has increasingly become part of the focus of the branch of philosophy of education interested in educational equity and access, as well as in work focusing on policy and curricular controversies and challenges related to difference and pedagogy. Gender identity, that is, transgender or transsexual identity in which individuals' gender identity differs from their socially recognized birth gender, is increasingly an issue for schools; and as political movements increasingly seek to either ensure recognition and rights for gender and sexual minorities or queer normative gender and sexuality freedom for everyone, the acronym LGBTQ (or acronyms that also recognize linkages with intersex, questioning, and curious people as well, e.g., LGBTQQIC) is a way to indicate such commonalities of interests.

Studies of sexual orientation and gender identity are also deeply concerned with power, whether conceptualized as domination or as the more generative power discussed by Michel Foucault, who argues that rather than seeing power as repressive, we need to examine how relations of power also generate resistances. By challenging heterosexism, homophobia, and transphobia, LGBTQ philosophical studies in education point out the degree to which education relies on and inculcates "normal" forms of gender and sexuality. Such work also challenges educators to alter practices of heterosexism (the presumption that heterosexuality is better than other sexual orientations) and heteronormativity (practices that ignore, censor, or derogate all other sexualities).

In addition, by focusing on the process of gender construction and the diversity of possibilities for gendered identity, LGBTQ studies in education advocate that the cisgendered—that is, people whose assigned birth gender and gender identity are

the same—challenge transphobia and think as carefully as do transgender people about the meanings and practices of gender.

Throughout the 1960s and 1970s, philosophers of education made brief and sporadic references to homosexuality, either to point out the power of gender norms or to indicate social deviance that should get more philosophical attention. In the first full-length essay focusing on gay studies in a major philosophy of education journal, Richard Mohr (1989) engaged the moral necessity of teaching about gay people and issues, especially given the widespread stigmatization of homosexuality. Using moral theory to explicate both the varieties of animus and the necessary normative force of gay studies, Mohr opened the conversation about gay studies in the philosophy of education, demanding that its intervention into a critique of normative sexual and gender identity be clearly understood as an ethical correction. Mary Bryson and Suzanne de Castell's work (1993) initiated a concerted turn toward poststructural queer theory while also keeping the experiential patterns of social positioning and their material effects clearly in view. Teaching queerly, they argued, tries to disrupt the usual narratives of learning and identity but invariably circles back over them as well, given the conservative structure of educational institutions and lingering conservatism among students. Deborah P. Britzman's (1995) psychoanalytically inflected queer theory, in relationship to the difficulties of pedagogy and the pervasive intransigence of the "normal," encouraged readers to "stop reading straight" and to understand the difficulties and the risks entailed by meaning making and by the interpretation of texts and of social relations.

The challenge of doing so has been charted in philosophical examinations of LGBT-inclusive curricular and educational policy, including multicultural approaches showing diverse families and relationship possibilities, preservice teacher education courses incorporating LGBTQ lessons, and work on LGBTQ student activism. Pragmatism's emphasis on the social processes of identity and the interruptions of such processes and liberal theory's principled defense of minorities and democratic education have been valuable resources in such work. In addition, attention to LGBT issues has pushed philosophy of education into an interdisciplinary relationship with qualitative research (Birden, 2004) and philosophically based cultural studies (Stitzlein, 2008). Philosophers of education have also shifted their methodological focus more firmly into

qualitative work to explore the political and identity-related experiences of queer youth, noting their resistance to dominant social and educational narratives demanding normalcy (Filax, 2007). The work of Foucault and Jacques Rancière, who traced the intricacies of power and knowledge, has also provided philosophical resources for work that examines the development of school-based LGBTQ organizations. Gender identity has yet to be fully discussed as a main topic in philosophy of education but has increasingly made its way into key examples in work concentrating on gender and sexuality (Mayo, 2008; Ruitenberg, 2010). Given the increasing attention to the educational needs of transgender youth and the increased possibilities of altering embodied gender, more work in this area will follow in philosophy of education, as it has also grown in other areas.

Work related to sexual orientation and gender identity in philosophy of education has maintained a focus on the disruptive possibilities of thinking queerly, whether in specific terms of sexual and gender identity or more broadly in terms of knowledge construction and dispute. As the longer history of philosophy of education has also been related to provocative and risky thinking, what may seem to be a marginal area is quite a traditional one, too.

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See also Dewey, John; Foucault, Michel; Gender and Education; Identity and Identity Politics; Liberalism; Teaching, Concept and Models of

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SINGLE- AND DOUBLE-LOOP LEARNING

The distinction between single- and double-loop learning has entered the lexicon of writers in the fields of professional and organizational learning, reflective practice, and organizational and social change. The terms are most closely associated with two American scholars—Chris Argyris and Donald Schön. For them, learning is not the accumulation of knowledge but the detection and correction of errors. Errors are mismatches between the intended and the actual results of action, whether the action was taken by individuals, groups, or organizations. Learning involves inquiry into the cause of the mismatch and revision of the action to bring about the intended consequences. This entry explains single-loop and double-loop learning and discusses the challenges in the implementation of double-loop learning.

The distinction between single- and double-loop learning is illustrated in Figure 1. It portrays the relationships between the three components of a theory of action and how feedback triggers revision of one or more of its components. A theory of action constitutes actions, the governing variables that they satisfy, and the intended and unintended consequences of those actions.

The distinction between single- and double-loop learning is illustrated with the following example. Imagine a supervisor who tells an employee that his or her performance is not up to standard. How the supervisor communicates this message (the action component of the supervisor's theory of action) is determined by his or her desire to persuade the employee to the supervisor's point of view and to do so with the minimum possible negative reaction. These two governing variables (persuade and protect) lead the supervisor to praise much of the employee's work and then briefly mention the concerns about the employee's performance. The consequence is no change in the employee's behavior. This is an error because the consequence (no change) is contrary to what the supervisor intended (improved performance).

It may be possible for the supervisor to correct the error by finding smarter ways of persuading the

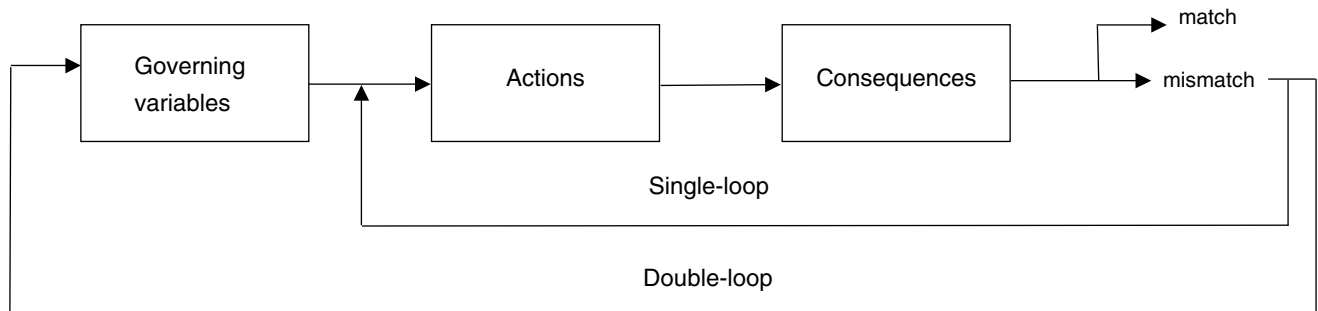


Figure 1 Single- and Double-Loop Learning

Source: Argyris (1999, p. 68). Reprinted by permission.

Note: This figure portrays the relationships between the three components of a theory of action and how feedback triggers revision of one or more of its components. A theory of action comprises the actions, the governing variables that they satisfy, and the intended and unintended consequences of those actions. In single-loop learning, only actions are revised as a result of feedback; in double-loop learning, the governing variables are revised, which then causes revisions to the actions.

employee of his or her point of view while still protecting the employee's feelings. This would involve single-loop learning, because the change is restricted to the action strategies, and the governing variables (persuade and protect) remain unexamined. There is no consideration of the adequacy of the values that are guiding the communication, or of the behavioral world that is created by such values, even if the revised action strategies prove effective. Double-loop learning requires adjustment of the governing variables that specify what counts as effective action. In this example, this would require inquiry into and possible revision of the supervisor's assumption that effective communication of negative feedback can be achieved by an appropriate balance of persuasion and protection.

Some writers on professional and organizational learning assume that double-loop learning is intrinsically more valuable than single-loop learning. This is not necessarily the case, as some errors can be corrected by adjustment of the action strategies without revision of the governing variables. What is clear, however, is that the capacity to double-loop learn, and thus to question our assumptions about what counts as effective action, is essential if individuals and organizations are to detect and correct errors that are caused not simply by poor choice of strategy but by taken-for-granted values and assumptions.

The empirical literature on professional and organizational learning suggests that double-loop learning, at both the individual and the organizational level, is rare. There are several reasons for this situation. First, systems theorists attribute the difficulty

to the dynamic complexity of many organizational tasks. Errors are hard to detect when actual and intended outcomes are difficult to measure. They are even harder to correct when causal relationships are obfuscated by multiple interactions, delayed effects, and constantly changing environments. Second, cognitive psychologists point to the fact that our memory and information processing are designed to favor efficiency over accuracy, and so we are more likely to notice and select information that confirms rather than disconfirms our prior experience and beliefs. Third, Argyris and Schön themselves attribute the rarity of double-loop learning to the prevalence of defensive interpersonal and organizational reasoning. This occurs when people experience or anticipate threat or embarrassment and avoid or ignore attempts to inquire into its source. Supervisors display defensive reasoning to the extent that they ignore or rule out the possibility that their own assumptions about how to be effective have contributed to the error. Individual defensiveness in such situations is likely to be exacerbated by defensive organizational cultures in which norms of loyalty and face-saving prevent discussion of the adequacy of the supervisor's theory of action. Taken together, these three factors provide formidable obstacles to double-loop learning.

The idea of double-loop learning has much in common with that of reflection, especially when the latter is conceived as a continuous process of critical inquiry into the adequacy of assumptions about the nature and desirability of the status quo. Unlike many approaches to critical inquiry and critical

reflection, however, Argyris and Schön's project has been centrally concerned not only with identifying the structural, cultural, and communicative barriers to double-loop learning but also with designing interventions that provide tough tests of their theories about how to create the conditions that make double-loop learning more likely.

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See also Reflective Practice: Donald Schön; Theories of Action

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SITUATED COGNITION

See Distributed Cognition

SOCIAL CLASS

The field of social class is a rich and contested area that has evolved considerably since Karl Marx (1818–1883) published *Capital* in 1867. Marx was the father of modern social class theory, and his theoretical framework was very much the product of a specific time and place, namely, European class society under conditions of industrial capitalism in the 19th century. Marx as well as Max Weber (1864–1920) are still influences on social class theory but have lost the dominance they held in the first half of the 20th century. Even in contemporary class theories, such as those of Pierre Bourdieu, there are

important traces, although largely unacknowledged, of Marxist and Weberian class thinking. After the radical class theory of Marx lost favor from the 1960s onward, there was a period when the dominant trend within class theory took a far more conventional approach, focusing primarily on the development of empirical class categories and schemas. That approach, which concentrated on position in the labor market, has recently been eclipsed, however, by a concern with understanding how those class positions are lived and experienced and how they affect an individual's education. Following a description of the particulars of Marx's and Weber's respective class theories, this entry reviews and compares the various class schemas that were devised to succeed them, outlines the main themes in the work of Bourdieu and a number of noted theorists who have been influenced by his approach, and notes the importance of the lived experience of social class for contemporary educational theory.

Class Theory in the Work of Marx and Weber

Marxist class theory was premised on the view that the history of society is the history of class struggle. At the core of Marxist social class theory was the notion of social transformation and the creation of a fair, socially just society in which unequal classes and the unjust relationships between them would no longer exist. Marx's analysis conceptualized relationships between individuals as being shaped by their relative position in relation to the means of production of goods. So classes are seen to be aggregates of individuals who perform the same respective functions in the labor market. Classes in themselves, however, actually only become classes when individuals occupying similar positions in the labor market become conscious of their common fate. This notion of collective class consciousness was key to Marxist class theory but has become increasingly problematic when applied to recent and contemporary society, in which there is little if any sense of collective class consciousness. Marx also created a binary relation between workers and the owners of the means of production, equating the former with the oppressed and the latter with the oppressor. The problem with such a division has been the growing numbers in the middle and upper classes who are not owners of the means of production. Senior managers, for example, may wield a great deal of economic power, although they are only salaried employees.

Less influential but still important for its focus on the relevance of consumption to class understandings has been the work of Weber. Weber differed from Marx in that he classified people into groups based on their consumption patterns rather than their position in the labor market. He saw class position as determined by a person's skills and education rather than by his or her relationship to the means of production. His theory combines class, which he defined as a person's economic position in society, with status, a person's prestige and level of social honor, and power, a person's ability to achieve his or her own ends. This provided a conceptual framework for understanding social class beyond the economic, in terms of life chances and symbolic rewards as well as market opportunities.

The Class Schema Approach

However, interest in Marxist and Weberian readings of class were largely superseded in the last half of the 20th century by approaches that were less radical and that were strongly influenced by quantitative and positivist methodologies within sociology. These approaches, which were concerned with developing class schemas, adopted a narrow and very specific conception of class, mainly defined in terms of employment situation. The social transformation of society that lay at the core of Marxism was replaced by a static notion of social class. The most common was a three-stratum model, dividing society into three general categories: (1) the upper class, the wealthiest 1% to 2% of the population; (2) the middle class; and (3) the working class. The middle-class category has been the most contested, and it is where most people claim to belong. It has recently been conceptualized as "the particular-universal class" (Ball, 2003), part of a growing trend for the middle class to be understood as the class whose practices are regarded as universally good, normal, and appropriate. As a result, in countries such as the United States and the United Kingdom the term *middle class* is applied very widely and encompasses many people who objectively would be considered working class or even upper class.

The three-stratum model accentuates interclass differences, but there is an important body of class theory that emphasizes intraclass differences, in particular intra-middle-class differences (Bernstein, 1996), arguing that internal divisions such as employment in the public or private sector, urban or rural living, and length of time one's family has been middle class all

have salience in relation to class identities, values, and practices. In contrast, intra-working-class differences constitute a neglected area in social class theory.

Not all class schemas used a simple, three-stratum model. Some were much more sophisticated. The Goldthorpe class schema, for example, is based on 11 classes, which are grouped into three main clusters—the service class, the intermediate class, and the working class (Goldthorpe & Marshall, 1992). A small number of class schemas, for example, those devised by Erik Olin Wright (1985) in the United States, attempted to formulate a Marxist-based class schema. He retained the Marxist approach of categorizing people in the labor market in terms of their relationship to the means of production and integrated notions of exploitation into the categories. But most of the scholarship in the area saw itself as moving beyond Marxism rather than attempting to build on it. This more empirical, work-based approach has been attacked for reducing class to little more than aggregates of occupations, and it has been increasingly criticized for not addressing either the cultural or the embodied experiences of belonging to a particular class. The class schema approach to class theory was seen to neglect the subjective experience of belonging to a particular class, marginalizing the meaning of class and the nature of class consciousness.

Bourdieu and Beyond

The most recent approach to class theory takes a much broader stance, incorporating a wide range of identities, behaviors, and attitudes. This approach, which gained popularity during the late 20th and early 21st centuries, has been strongly influenced by the theorizing of the French sociologist Pierre Bourdieu (1930–2002), and it developed as a result of the awakening of interest in identity and symbolic domination. At present, social class is seen to be a matter of unequal social recognition as well as unequal distribution of economic resources. Class is viewed as centrally implicated in culture and identity. One consequence is that social class is no longer seen to be just about exploitation and economic inequalities but about cultural and symbolic domination as well. As a result, there has been a move away from viewing the labor market as the epicenter of class production and reproduction; social class came to be defined not by relation to the means of production or by possession of specific skills and capabilities but by possession of all forms of economic capital (wealth and income), social capital

(contacts and networks), and cultural capital (education and “good taste”; Bourdieu, 1984).

This new theory of class as cultural, individualized, and tacit is often in tension with older Marxist conceptions of class as collective and oppositional, where one’s class position was seen to be unambiguous and clear to all. However, a new strand of class theory attempts to bridge the two different conceptions of class as individualized and collective by developing psychosocial understandings of class in which psychic and moral economies of class are mapped out. These outline the ways in which class identities generate feelings of inferiority and superiority, visceral aversions, defenses, recognition, and abjection, constituting new forms of class consciousness (Reay, 2005). Such work often draws on Bourdieu’s concept of *habitus* as a conceptual tool that integrates the individual and the collective. Bourdieu (1985) developed the concept of habitus to exemplify the ways in which the wider social world is inscribed in the body of the biological individual. So a person’s individual history is constitutive of habitus, but so also is the whole collective history of family and social class that the individual is a member of. Much of this scholarship on social class inspired by Bourdieu shares the ambition of earlier Marxist class theory in attempting to combine objective and subjective notions of class. It endeavors to map individuals’ position in social and economic fields while also examining the impact of this position on values, practices, and self-identity through the lens of habitus.

Contemporary conceptions of class now include understandings of how class is lived and experienced on an individual as well as a collective level. This has meant a return to the in-depth focus on the lived experience of social class so powerfully portrayed in the work of Richard Sennett and Jonathan Cobb (1973) and Lillian Rubin (1976) in the United States and of Brian Jackson and Dennis Marsden (1966) and Paul Willis (1977) in the United Kingdom in the mid- to late 20th century. It has also underscored the importance of class for education. Not only is social class seen to have a large impact on an individual’s educational opportunities, but it is also seen to have major consequences for his or her educational experiences and the extent to which each one comes to see himself or herself as an insider or outsider in relation to education.

Conclusion

What the history of class theory to date reveals is that there is an important place for both quantitative

and qualitative methodologies and understandings of class. At the beginning of the 21st century there is an increasing consensus that social class theory should combine class schemas with a focus on the lived experience of social class; there is a growing recognition that we need to know not only individuals’ position within the social structure, and in particular the labor market, but also how that social location is lived and experienced and how it affects educational experiences as well as wider social opportunities and outcomes.

Diane Reay

See also Marx, Karl

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SOCIAL COGNITIVE THEORY

Social cognitive theory (SCT) is an account of human behavior and learning developed during the last half of the 20th century by Albert Bandura, a Canadian psychologist and professor of psychology at Stanford University. SCT is one of the most influential psycho-

logical theories of learning informing contemporary education. Its theoretical assumptions and the ways in which they have enabled and constrained educational inquiry and practice deserve careful, critical consideration.

SCT's core postulate is that our behavior, thinking, and learning are constituted within a triadic, reciprocal interactivity among personal, behavioral, and environmental factors in which each set of factors is connected causally and bidirectionally to the others. This core assumption is accompanied by two additional and closely related assumptions: (1) that persons have a constrained, yet potentially influential capability to self-determine their actions and (2) that although learning requires the experience of behavior and its consequences (either directly or vicariously), learning cannot be reduced to behavioral change. Learning that involves the acquisition of knowledge, concepts, rules, strategies, and values may not be evident in immediate behavioral change, as some forms of behaviorism assume and require. This entry discusses the development of SCT, the adequacy of the model of triadic reciprocal determinism, the theoretical and conceptual difficulties of SCT's depiction of human agency as self-efficacy, and potential directions of research into SCT and its applications in education.

During the second half of the 20th century, Bandura, his students, and many others produced a steady stream of empirical demonstrations of observational learning, the role of self-beliefs in learning (especially beliefs concerning one's ability to perform particular actions related to personal goals), and the instructional effectiveness of psycho-educational interventions utilizing modeling, belief modification, and self-regulation. In general, these demonstrations are interpreted as confirming the basic SCT tenets of triadic, reciprocal determination, social learning in the absence of immediately observable behavioral engagement or change, and self-determination or self-regulation. SCT is currently one of the most influential psychological theories informing educational practice in North America and, increasingly, throughout the world. Nonetheless, a steady stream of critical reactions to the core assumptions and research and intervention practices of SCT has attended the history of its ascendance.

How Adequate Is the Model of Triadic Reciprocal Determinism?

Bandura (2001) claims that the model of triadic reciprocal determinism assumed in SCT avoids

"contentious dualisms" that "pit psychological and sociocultural theories as rival conceptions of human behavior" (p. 14). The advantages of theorizing permeable boundaries and ongoing interactivity across personal, behavioral, and environmental (especially sociocultural) factors are clearly illustrated in the empirical success of Bandura's theorizing about observational learning. Confirmation of the acquisition and strengthening of behavior through observing the execution and consequences of the behavior of others surely counts as one of the most reliable and important findings in the history of applied social psychology (Barone, Maddux, & Snyder, 1997). The social and educational relevance and significance of such work is undeniable and has clear implications for a wide range of educational interventions aimed at reducing aggression and teaching socially desirable conduct, as well as strategies for learning and studying.

Nonetheless, SCT and the model of triadic reciprocal determinism it assumes are not free of "contentious dualisms." The latter clearly separates behavior from personal factors such as intentions, deliberations, reasons, goals, and purposes. This separation implies that behavior is not personal in the way in which cognitive, affective, and biological factors are personal. Severing behavior from the motives, understandings, and emotions that attend it has important theoretical consequences, several of which are most obvious in SCT's depiction of human agency as self-efficacy.

Self-Efficacy

"Perceived self-efficacy refers to beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1997, p. 3). In terms of SCT's model of triadic reciprocal determinism, self-efficacy is conceptualized as a personal factor that is causally efficacious in producing goal-directed behavior. Many critics have raised concerns about this conceptual and theoretical framing of self-efficacy (see Martin & McLellan, 2013), pointing out that it is impossible, artificial, and/or misleading to separate self-efficacy from the behavior for which it is supposed to constitute a causal explanation. When people act, their appraisals of the action context and their own capabilities are part and parcel of their acting, as are their motives, emotions, and mannerisms. With its core assumption of triadic reciprocal determination, SCT creates an inner, psychological cause for behavior by theoretically

removing the intentionality, predictability, and judgment that are part of any action, applying the label of *self-efficacy* to that which has been removed, and then treating self-efficacy as a cause of the very actions from which it has been theoretically separated. But parts of actions cannot be causes of that of which they are parts. For this to be the case, it would need to be shown that self-efficacy exists independently of the actions with which it is associated.

However, it seems clear that self-efficacy is conceptually linked to action in a part-whole relationship. Self-efficacy is not a cause of a student's ability to sit attentively in class or to solve quadratic equations. Perceived self-efficacy is part of one's intentional engagement when attending and doing algebra. The ability to perform or execute such actions is a consequence of a history of social learning that has unfolded during the course of students' lives. If we want to determine the causes of educationally significant actions, we should look at these histories of interactivity within the sociocultural and biophysical world. We should not assume an immediate, proximal psychological cause that has the effect of foreclosing our inquiry. In educational contexts, there are many obvious causal factors that demand our attention, including the quality of teacher-student interactions, the funding and administration of schools, the social and political practices of communities, and so forth. As Biglan (1987) has suggested, a consideration of social, contextual factors as possible causes of self-efficacy and the actions of which it is part is more likely to yield knowledge of our agentic functioning as persons than is the collection of self-efficacy ratings.

Another way of critiquing some of the theoretical, conceptual difficulties created by SCT's fitting of human agency into its model of triadic, reciprocal determinism is provided by Smedslund (1978). Smedslund has argued that the theory of self-efficacy relies on commonsense ideas and conceptual understandings that make the purported empirical, causal relation between self-efficacy and behavior a matter of logical necessity. According to Smedslund, when psychological researchers in education find that individuals with high levels of self-efficacy are more likely to perform well than individuals with lower levels of self-efficacy, such a finding is nothing more than the commonplace recognition that people who think they can do things are more likely to do them than people who think they cannot do them. Such a "result" is conceptually implicated in our everyday ways of talking and thinking about our actions and does not require additional empirical confirmation.

Enriching Educational Applications

None of these criticisms necessarily invalidates the basic assumptions of SCT, but together, they raise serious questions concerning the precise ways in which these assumptions have been articulated and the kinds of inquiry that have been conducted on the bases of these formulations. Martin (2004) considers a variety of theoretical concerns and issues in the area of SCT and self-efficacy and proposes forms of educational inquiry and intervention that assume a reconfigured model of the ways in which human actions and capabilities develop. He argues that a core difficulty that confronts SCT-based research and applications in education is the absence of an adequate developmental theory. To date, SCT research has focused on interactions between personal, behavioral, and environmental factors using designs that encourage the examination of a relatively narrow range of social and psychological interventions that can be examined in short-term, here-and-now exchanges in classrooms and elsewhere (e.g., the modeling of desired behavior or the teaching of self-instructional strategies to enhance self-efficacy). A much-needed extension would see greater emphasis on longer-term, longitudinal, and developmental designs for both research and intervention. Instead of assuming that social environments in homes or schools consist only of the behaviors of others that can be readily manipulated as independent factors in traditional psychological research, longitudinal, qualitative, and developmental inquiry might examine ways in which the social and cultural traditions, routines, and forms of life and learning practiced in homes and schools help constitute self and other understandings and interactions. This change could encourage greater creativity in the construction of classroom environments and interactions that encourage the full participation of students in learning activities that embed them within problem contexts, strategies, and practices that help constitute their emerging identities as young writers, scientists, mathematicians, and socially responsible citizens (in the manner envisioned by Vygotsky and other sociocultural activity theorists, see van Oers, Wardeken, Elbers, & van der Veer, 2008).

Conclusions

SCT is one of the most promising of all psychological theories in terms of its potential for enhancing the learning experiences of students in schools. The social and observational learning it illuminates

rightly deserve the close attention of educational theorists and practitioners. By critically examining and extending the basic model of triadic reciprocal determinism in ways that make SCT less prone to well-known conceptual and theoretical limitations and more creatively generative concerning developmental and educational contexts and possibilities, SCT should continue to inform the classroom practices of teachers concerned with the initiation of students into a full range of social and intellectual practices and accomplishment.

Jack Martin

See also Learning, Theories of; Metacognition; Motivation; Self-Regulated Learning; Stereotype Effects and Attributions: Inside and Out; Vygotsky, Lev

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SOCIAL CONSTRUCTIONISM

Social constructionism was one of the most popular as well as one of the most controversial positions in late 20th-century social science. Fiercely debated, and both vilified as well as honored, the position has gradually “settled into the suburbs” as a fundamental and foundational position in the social sciences and education. This entry discusses several of the most influential forms of social constructionism in

psychology and ends with an indication of how it has made an appearance in the educational literature.

Social Constructionism Versus Constructivism

Social constructionism can be understood as the thesis that many of the social realities (roles, rules, and relationships), the networks of beliefs about these that are transmitted to new generations, and also the public bodies of knowledge that we identify as the disciplines—all realities that we constantly interact with and that shape our lives—are not parts of an original, preexisting “furniture of the earth” that humans have discovered in nature but, in fact, are realities, regularities, or bodies of knowledge that are *constructed within societies by means of social processes*. It is important to distinguish this social constructionism from the more general concept of constructivism. The latter is a philosophical term with more general import going back to the 19th century and refers, at least in part, to the cognitive construction of knowledge. As such, it has roots in the work of John Dewey, Lev Vygotsky, Jean Piaget, and Jerome Bruner, among many others. In psychology, it is also associated with the personal construct psychology developed by George Kelly. In addition, there are elements of constructivism in contemporary cognitive psychology and cognitive neuropsychology. However, this broad position is both more general and less clearly delimited from a cognitive psychology of learning. Furthermore, it has little bearing on the notion of social constructionism. In educational contexts, constructivism is understood as a necessary step toward analyzing learning in context and the active construction of knowledge by the learner (this constructivism has generated a voluminous educational literature; see Phillips, 1995). Attempts to disambiguate constructivism from social constructionism are difficult, given that some authors also use the hybrid term *social constructivism* to refer to what is generally considered *constructivism*. It should also be noted that many authors use the terms *constructivism* and *constructionism* quite loosely. However, in the present discussion, the terms *constructivism* and *social constructionism* are strictly differentiated. This entry does not discuss the broader and alternative forms of constructivism but focuses instead on social constructionism.

Origins

Social constructionism as a thesis about the origins of social realities and bodies of social knowledge

about these realities originates with the well-known book by Peter Berger and Thomas Luckmann, *The Social Construction of Reality: A Treatise in the Sociology of Knowledge*, published in 1966. According to Berger and Luckmann and as the subtitle indicates, it was primarily an extension of work in the sociology of knowledge. However, the impact was broadly felt in many disciplines, including psychology and education. As Berger and Luckmann (1966) noted, “The sociology of knowledge is concerned with the analysis of the social construction of reality” (p. 15). Hence, although concerned ostensibly with what takes on the attributes of “knowledge” in any society, the authors were clear that they were extending the conception of “knowledge” from previous sociologies of knowledge, in particular that of Karl Mannheim. In Mannheim’s *Ideology and Utopia* (1936), the sociology of knowledge was already extended to all aspects of human thought, particularly its ideological foundations. Berger and Luckmann (1966) further argued that “the sociology of knowledge must concern itself with everything that passes for ‘knowledge’ in society,” including what people “‘know’ as ‘reality’ in their everyday, non- or pre-theoretical lives” (pp. 26–27). Two features of this are important. First, Berger and Luckmann explicitly attributed this insight to the work of Alfred Schütz, who had analyzed the structure of the commonsense world of everyday life. Second, they explicitly refused to deal with epistemological questions about the validity of this socially produced knowledge, claiming instead that their concern was with empirical questions that arose out of their analysis.

An examination of Chapter 2 in the *Social Construction of Reality*, titled “Social Interaction in Everyday Life,” shows that Berger and Luckmann were deeply inspired by Schütz (under whom Luckmann had studied) and the latter’s notion of “consociates,” or those with whom we share time and spatial access, and “contemporaries,” or those we know from anonymous sources such as news media. For Berger and Luckmann, this phenomenological conception of relationships is crucial to social structure since social structure is the sum total of consociates and contemporaries.

Social Constructionism in Psychology

Within psychology, both Rom Harré and Kenneth Gergen developed alternative social constructionist positions in the 1980s that were highly influential,

even though Rom Harré does not consistently refer to his position by that name, frequently using the expression “second cognitive revolution” instead. Unlike Berger and Luckmann, neither Rom Harré nor Gergen uses *social constructionism* as a special term for a sociology of knowledge. Instead, their positions are broadly epistemological ones about the way in which features of the world can be known.

Rom Harré (1983) has argued that the “primary human reality is persons in conversation” (p. 58). Many psychological phenomena can be viewed as properties of discourse. Thought itself, or the private use of symbolic systems, is also derived from discursive processes. Human development must occur through the transfer of rules and conventions that govern public conversation and other social practices. Finally, “the production of psychological phenomena, such as emotions, decisions, attitudes, personality displays, and so on, in discourse depends on the skill of actors, their relative moral standing in the community, and the story lines that unfold” (Harré & Gillett, 1994, p. 27). By this, Rom Harré means that human beings are physical and social beings—we are physical beings because we are embodied, and we are social beings because we must appropriate the necessary conventions, norms, and mores from language to make us members of a particular social group. For Rom Harré, this is a realist social constructionism; both our physical being and our social being are rooted in the real properties of biology and conversation.

In 1985, Gergen published his well-known article “The Social Constructionist Movement in Modern Psychology” in the *American Psychologist*. His particular version of social constructionism moved radically beyond Rom Harré’s, primarily by denying the reference to reality and also by allocating to constructionism a different goal: In an oft-repeated phrase, Gergen argued that social constructionism “begins with radical doubt in the taken-for-granted world—whether in the sciences or daily life—and in a specialized way acts as a form of social criticism” (p. 267). Appealing to a variety of philosophies of science as well as a range of critical scholars, Gergen argued that any number of standard accounts of psychological disorders, beliefs, and other phenomena are not “objective” but are “highly circumscribed by culture, history, or social context or altogether nonexistent” (p. 267). This distanced Gergen’s conception of social constructionism from those that preceded it, not only Rom Harré’s but also that of Berger and Luckmann.

In addition, Gergen noted that the “terms in which the world is understood are social artifacts, products of historically situated interchanges among people” (p. 267). Giving various ethnographic and anthropological examples, Gergen argued that these “direct our attention to the social, moral, political and economic institutions that sustain and are supported by current assumptions about human activity” (pp. 267–268). Perhaps most controversially, Gergen (1985) claimed,

The degree to which a given form of understanding prevails or is sustained across time is not fundamentally dependent on the empirical validity of the perspective in question, but on the vicissitudes of social processes (e.g., communication, negotiation, conflict, rhetoric). (p. 268)

Recognizing that people may “eschew” constructionism for what appears to be its rampant relativism, it is nonetheless not possible to furnish objective foundations for knowledge. Defending this by reference to “communities of shared intelligibility,” Gergen was careful to note that not anything goes.

Gergen had moved some way from Berger and Luckmann, who played a very minor role in his formulation. Instead, constructionism is given its historical pedigree by placing it not in the tradition of Husserl, Schütz, and Berger and Luckmann but rather in what Gergen calls the “exogenic-endogenic antinomy” (p. 269). That is, constructionism comes out of a struggle to understand the crucial features of human life as external or internal and thus is the outcome of a long history of philosophical, social, and psychological thought. It thus transforms social constructionism from a thesis about knowledge to a social and psychological theory, a burden that would turn out to be difficult for social constructionism to bear, particularly since it did not have the superstructure to support such a broad social and psychological theory. The emphasis on language, discourse, and the constructive nature of discourse was foundational for a social constructionist account on Gergen’s terms, and knowledge and social action were thoroughly intertwined.

Gergen has continued to elaborate his version of social constructionism through numerous books and articles and more recently by developing a “relational psychology”—although it is not always clear if the latter is meant as an elaboration of a social constructionist position or is a new direction in his thought.

Psychology has also produced numerous other forms of social constructionism, which has taken the overall project in numerous directions. For example, John Shotter’s characterization of social constructionism was concerned with two important characteristics of human social life, joint action and knowing from within. Joint action is “neither just human action or just natural event” (Shotter, 1993, p. 4). Instead, it comes out of “a sense of what is felt and required in interactions, such as conversations, where actions are determined not by rules or laws but by the unfolding responses and activities of moment-by-moment events.” Furthermore, joint action is developed from “within the activities of participants” who make sense of their activities. This gives way to a kind of knowledge that emerges from within joint action, “knowledge of a moral kind,” and hence, this is a third kind of knowledge or “knowing from within” (Shotter, 1993, pp. 5–7) to differentiate it from “knowing how” and “knowing that.” This too is a further development of a social constructionist project along the lines of a neo-Vygotskian alternative psychology.

In addition, there are versions of social constructionism among those who pursue studies in discourse analysis—for example, the earlier work of Jonathan Potter and Margaret Wetherell—that mirror a number of these later developments in social constructionism. Among those who study the uses of language, talk is viewed as a situated and occasioned construction, a move that opened up a whole range of possibilities for the analysis of everyday talk. Feminist social constructionism, as developed by scholars such as Mary Gergen or Rhoda Unger, has taken up the relation between essentialist gender categories and the manner in which they make resistance or change possible.

Social Constructionism and Education

It has often been noted that education is the process by which a society reproduces itself—and it does this in large part by passing on to members of the rising generation the social knowledge that they must have to navigate the roles, rules, and relationships that make their society what it is. However, these social realities are usually treated as if they were immutable and objective, rather than human-made and debatable—and thus social constructionism opens up a new perspective for educators of a more radical disposition. In this context, it can be noted that the philosopher Ian Hacking (1999) makes the point

that social constructionism is frequently critical of the status quo. It tends to hold that, as a starting point, “X need not have existed, or need not be at all as it is . . . X as it is at present, is not determined by the nature of things, it is not inevitable.” However, some versions of social constructionism go further than Hacking’s account, asserting that “X is quite bad as it is. We would be much better off if X were done away with, or at least radically transformed” (p. 6). Hence, social constructionist accounts of gender, race, the mind, the self, and so on are often critical accounts of current knowledge, aimed at transforming the status quo. In this vein, the educational and political theorist Michael Apple (1993) has pointed to the social processes that he believes have been responsible for constructing what he calls the “official knowledge” that is passed on via the school curriculum:

It has been argued in considerable detail elsewhere that the selection and organization of knowledge in schools is an ideological process, one that serves the interests of particular classes and social groups. However, as I just noted, this does not mean that the entire corpus of school knowledge is a “mirror reflection of ruling class ideas, imposed in an unmediated and coercive manner.” Instead, “the processes of cultural incorporation are dynamic, reflecting both continuities and contradictions of that dominant culture and the continual remaking and relegitimation of that culture’s plausibility system.” (pp. 55–56)

Kurt Danziger, in a review of the literature on the topic of social constructionism, noted that there is a “light” and a “dark” version. The “light” version merely claims that while the reigning orthodoxies of the day must be resisted, they are resisted for the sake of tolerance and openness to others. The “dark” version of social constructionism is concerned with relations of power that are embedded in all discursive relationships. Furthermore, “dark” social constructionists tend to privilege manifestations of power in the body and in structures of society. The influence of Michel Foucault is obvious on this latter version of social constructionism. Although Danziger’s choice of terms (*light* vs. *dark*) is dramatic, it does highlight a tension that remains in various versions of social constructionism and that often plays out in debates about the nature and content of educational processes.

The explicit discussion of social constructionism as a force in psychology and elsewhere has moved into the background as social constructionism has either become taken for granted as a background to certain kinds of research such as discourse analysis or explicitly rejected and hence often no longer debated. In this way, the position is still very much present in certain areas of psychology while completely ignored in others. For two complete journal issues devoted to these questions, see Stam (2001, 2002).

Henderikus J. Stam

See also Apple, Michael; Critical Theory; Discourse Analysis; Edinburgh School of Sociology of Knowledge; Feminist Epistemology; Foucault, Michel; Radical Constructivism: Ernst von Glasersfeld

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SOCIAL DARWINISM

Social Darwinism generally refers to a sociological paradigm that draws on evolutionary theories to explain societal and racial development, progression, and stratification. Emerging in the late 19th century, it played a highly influential role throughout the development of Western thought and popular culture until the 1940s. Although now discarded due to its outdated evolutionary theories and associations with racist, sexist, and imperialist ideologies, remnants of social Darwinism continue to surface—for example, in contemporary debates on education and welfare reform and in popular texts like Richard Herrnstein's and Charles Murray's *The Bell Curve* (1994). While social Darwinism has historically lent itself to applications that span the left-right political spectrum, politically leftist versions of it (i.e., the application of evolutionary theories to argue for egalitarian political-economic systems) have been forgotten in contemporary usages and popular conceptions. Examples of leftist versions include the anarchist philosopher Peter Kropotkin's *Mutual Aid: A Factor of Evolution* (1902) and the novelist Jack London's *The People of the Abyss* (1903).

Origins and Basic Premises

Social Darwinism evolved from 18th- and 19th-century intellectual environments and debates concerning the ontology of the natural and social world and draws on a number of influential theories including Isaac Newton's laws of motion, Thomas Malthus's utilitarianism, Georg W. F. Hegel's idealism, and Auguste Comte's positivist sociology.

However, its organic evolutionary accounts mostly stem from the works of the French biologist Jean-Baptiste Lamarck (1744–1829) and the English naturalist Charles Darwin (1809–1882). These consist of Lamarck's contentions that environmental pressures force organisms to acclimate by developing physiological modifications throughout their lifetimes, which are then passed down to succeeding offspring. This constitutes the *inheritance of acquired characteristics* hypothesis, which postulates that organisms have some agency over their adaptations that can, for example, come from the use or disuse of organs. Continuous adaptations over time drove simple animals to become more complex, and evolution is thus a progressive linear process

following a continuum of increasing complexity and perfectibility. Darwin's indirect contributions came from select premises of his theory of natural selection, which include the following: population growth in the natural world forces organisms to compete for scarce resources; those with spontaneously developed mental and physical traits that grant advantages in survival and reproduction rates can, through genetic inheritance, pass on those traits to succeeding generations; the gradual and accumulative effects of selection and inheritance, over time, results in the ascendance of new species and extinction of others (Hawkins, 1997).

On their own, these evolutionary accounts are purely descriptive, subject to scientific investigation, and those who held or expounded them were not necessarily social Darwinists. However, when amalgamated with the following ideologically flexible premise, they form the basic descriptive and normative components of the social Darwinian framework: The biological laws that determine organic evolution also determine sociocultural evolution, and therefore, societies and individuals should enact norms and values that reflect those found in nature to facilitate the progression of humanity into more advanced and harmonious social and natural environmental settings.

Political-Economic Implications

This framework provided social Darwinists of all political orientations with scientific explanations of how the world came to be—natural selection—while preserving their own agentic capacities to shape the world as is ought to be—that is, via artificial selection and transmission of acquired characteristics. As stated earlier, leftist social Darwinists also drew on this framework to argue for socialist systems that can help progress humanity into a more harmonious and egalitarian existence. However, much of what is today popularly understood as social Darwinism can be attributed to the works of the English sociologist Herbert Spencer (1820–1903), who coined the phrase most synonymous with social Darwinism—“survival of the fittest.”

Reflecting the hubris of 19th-century Western imperialism, Spencer's social Darwinism synthesized Lamarckian and Darwinian theories and integrated them with racist and laissez-faire economic ideologies to argue that racial and social stratification were natural by-products of evolution (Spencer, 1884/1960). According to this synthesis,

as humanity evolved through the competitive struggle for scarce resources, the corresponding warfare led to the formation of groups and societies. The selective pressures of continuous warfare eventually led Western European groups and their descendants to develop superior cognitive and cultural adaptations, which resulted in their hegemony over non-European groups.

Furthermore, as societies became more peaceful and cooperative, and individuals more rational and altruistic, the checks and selective pressures on human population growth induced by war were gradually lifted and replaced by industry and free-market capitalism. Spencer believed that unregulated capitalism mimicked the competitive and evolutionary mechanisms of natural selection at the inter- and intragroup levels and generated character traits such as rationality, self-reliance, and an appreciation for individual liberty necessary to further social evolution. Those individuals who naturally held these traits as a result of their pedigree, as evident in their wealth and high social status, or who could otherwise develop them by adopting a strong work ethic and self-reliance, were deemed the most fit for survival. Individuals who naturally lacked or otherwise failed to adopt these traits would inevitably die off. Public charities and government regulations (including child labor laws, taxation to fund public schools, and antipov-erty programs) that provided resources to anyone based on need rather than character were viewed by Spencer as well-intentioned but wasted efforts that consequently constrain individual liberty and effort, reward laziness and vice, and postpone the suffering and extinction of the unfit. Instead of diminishing suffering, it eventually increases it. It favors the multiplication of those worst fitted for existence and, by consequence, hinders the multiplication of those best fitted for existence—leaving, as it does, less room for them (Spencer, 1851, p. 381).

Although Spencer believed that natural and market mechanisms would inevitably eliminate the unfit, thus rendering direct intervention unnecessary, prominent figures like the English statistician Francis Galton (1822–1911) took Spencer's ideas to their logical conclusion and argued for eugenics programs that monetarily incentivize those deemed to have superior genetic makeup to marry and reproduce and disincentivize those of weaker stock from reproducing. These ideas inspired laws across 33 U.S. states that allowed for the forced sterilization of women who were considered feeble-minded

or who demonstrated other “degenerate” characteristics that were considered likely to be passed onto their children. Similar policies were initiated throughout the world during the first half of the 20th century, the most extreme of which was implemented by the Nazis during the Holocaust.

Because of this sordid history, very few would today argue for the political application of explicitly social Darwinist ideas. However, Spencer's social Darwinism and its “survival of the fittest” discourse endures and can be found in contemporary neoliberal policies that eliminate, cut funding for, and/or allow for the privatization of social services and public institutions and that are premised on the belief that competitive market mechanisms will allow societies to progress and solve all of their ills.

Common Misnomers

Spencer's social Darwinism has also contributed to popular misconceptions of classical liberal and Darwinian theories. With regard to the former, its political-economic components are typically linked to the ideas of classical liberals, like Adam Smith (1723–1790), who viewed self-interestedness as a dominant human disposition, which if channeled through unrestricted markets can lead to creative and socially beneficial outcomes. Smith also emphasized, however, that humans are equally cooperative and empathetic, and therefore, his arguments for unrestricted markets rested on the notion that cooperative, empathetic, and self-interested human dispositions and practices would balance each other out and promote social equality among all of humanity (Werhane, 1991). In this context, Spencer's social Darwinism and its emphasis on individualism and cutthroat competition is more reflective of Thomas Hobbes's state-of-nature ontology than of classical liberalism.

On the latter, the general social Darwinian premise that equates evolution with progress is borrowed from Lamarck, not Darwin. Most contemporary evolutionary theorists favor the Darwinian branching view of evolution, which has no specific trajectory, and which argues that local adaptations to changing environments can vary in complexity; in other words, that natural selection leads to the “survival of the fit enough.” Darwin himself abstained from applying his theories to the sociopolitical realm, and as the evolutionary biologist Stephen Gould (1992) argues, natural selection offers no

general political applicability for those who view progress as innate.

Rodolfo Leyva

See also Bell Curve; Evolution and Educational Psychology; Liberalism; Spencer, Herbert

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SOCIAL RECONSTRUCTION

The historical context of social reconstruction is set within the decades of the 1920s and 1930s. The excesses of capitalism, which included the alienation of workers, labor strife, ostentatious wealth, and inflated securities, all of which occurred in the 1920s, thundered to a halt following the stock market crash of 1929. Within this historical context, some educationists sought reform of what they believed to be a political and economic system run amok and one that perpetuated social inequality. The social and economic mess created by capitalists and those who supported them could only be ameliorated through a sound program of educational reform—or at least this was the belief of many progressive and social reconstructionist educators. The excesses of the 1920s and the financial crisis of the 1930s became a common theme repeated by leading social reconstructionists and progressives such as George Counts, Theodore Brameld, and Harold Rugg at the annual meetings of the National Education Association (NEA) throughout the early 1930s. Historians of American education identify George S. Counts (1889–1974) as being founder of the social reconstruction movement and as being the most radical, albeit Theodore Brameld is also

credited by many as having this status. This discrepancy may be related to each of these educational philosophers' experience with Marxist thought. This entry traces the roots of social reconstruction in the reform movements of the Progressive Era; follows the careers of Counts, Brameld, and Rugg and their respective contributions to educational reform and social reconstructionist theory; and places their efforts within the context of responses given by outspoken conservative voices and leaders of corporate and social organizations to the notion of educators as agents of social change.

Historical Background

Far from simply being an educational reform, social reconstruction as a theory, and later as a philosophy, incorporated both economic and political reforms in its agenda, as evidenced by the 1934 "Rugg Report," delivered at the biannual meeting of the NEA. As a reform movement, social reconstruction is located under the umbrella of progressivism. Throughout the 1920s and 1930s, nearly every sector of American life claimed membership in the progressive movement—social welfare, the news industry, banking and finance, government, and of course, education. However, progressive educators were far more interested in the child-centered movement as an avenue for change in society than were the social reconstructionists.

To progressive educators, if children's interests were developed alongside elements of active citizenship, then they would be more likely to reform their immediate world as future needs arose. Social reconstructionists, on the other hand, were more direct in their approach to social change. These differences would lead prominent social reconstructionists such as Counts, Rugg, and Brameld to separate themselves and their ideas from the rank-and-file progressives. For social reconstructionist leaders, as well as their fellow educators from the elementary school to the university campus, efficiency (which their critics called indoctrination) played a central role in the nascent social reconstruction philosophy of the 1920s, which was later put into print in 1934 in the form of the 1934 Rugg Committee Report to the NEA.

Discourse on Discrepancy: Counts or Brameld?

For many, it may not be important to know whether Counts or Brameld was the most radical of the

social reconstructionists. What may be of significance, however, is why academics believe that one or the other stood out as being the most radical. The “why” is based on assumptions about the political loyalty of all three leading social reconstructionists, which included Rugg. When the United States and the Western world experienced catastrophic losses in World War I, and a new economic system was ushered in by the Bolshevik Revolution in Russia, Counts championed the core idea of social reconstruction, namely, that schools and teachers should be agencies for social change. Counts has often been portrayed as the most radical in the social reconstructionist camp, probably because he readily embraced the concept of social and economic equality, which in the 1920s he believed was best conveyed by the intelligentsia of the Bolshevik Revolution, who had called for a sweeping redistribution of wealth and power on behalf of the workers and peasants against the monarchy of Czarist Russia. Counts was criticized by fellow academics, political luminaries, and industrial barons for flirting with tenets of the new economic and political system in what became the Soviet Union.

Undaunted, Counts advanced his position on social reconstruction with his now famous 1932 address to the NEA titled “Dare the School Build a New Social Order,” in which he outlined his reconciliation of cultural transmission with social critique as purposes of education. This call to change the purpose of schools from transmission of cultural knowledge and heritage to one of social reform—a call that directed teachers to foster in their students the skills of critical examination of social conditions and how to solve them—raised the ire of many. Hence, Counts, as an early leader of social reconstruction, was viewed by many as unpatriotic. Patriotic groups such as the Daughters of the American Revolution and the American Legion took exception to social reconstructionist ideas with respect to what their members believed was a thinly veiled effort to expose American children to the glories of socialism or communism. Industrial and business groups such as the National Association of Manufacturers, believing that social reconstruction was an attack on free enterprise, also contributed to the antisocial reconstructionist chorus.

The real Marxist voice within the social reconstructionist camp, however, was Brameld. Social reconstruction as a branch of progressivism suited activist-minded educators who dedicated themselves to righting what they regarded as the wrongs of

America’s capitalist experiment. Brameld was one of the social reconstructionist educators whose proclivity toward politics was matched by zeal for social reform; he coined the slogan “education as power” (Wheeler, 1967, p. 11) and was described by Howard M. Ozmon (1966) as “the most outstanding Reconstructionist in American Education at the present time” (p. 186).

As a student at the University of Chicago, Brameld studied with the well-known and highly regarded American progressive philosopher and politician T. V. Smith. Additionally, he was well versed in early 20th-century Russian social political and intellectual thought. As a junior colleague of Counts and Rugg, Brameld—due to his deep interest in Marxist ideology—recast the direction of social reconstruction to incorporate an economic examination of American life. In his 1935 article in *The Social Frontier*, “Karl Marx and the American Teacher,” his interest in class struggle and economic critique of American education leaves little doubt about his position. That Brameld embraced the problem of social reconstruction as a global one spoke to his belief that “the world’s” problems of social, political, and economic inequality are by-products of the post-Renaissance world, which he viewed as ushering in an era of unbridled individualism. Brameld’s keen interest in globalism and internationalism along with his early education in Marxist theory and history convinced many that he was a closet communist and radical.

Harold Rugg and the 1934 Report to the NEA

Harold Rugg was perhaps the most colorful of the social reconstructionists. His earthy communication style put him in touch with folks in higher education as well as with the average teacher. Trained as an engineer, Rugg always gravitated to problem-solving endeavors, and he applied his background to education. At the height of America’s economic plight following the collapse of the stock market in 1929, Rugg published a series of textbooks designed to teach students how to examine social life and how to rectify the problems that they had identified. His books could be found in scores of secondary school libraries across the land. Their content—far from containing radical ideas—was actually straightforward, with photographs depicting a family in poverty and asking students to explain the cycle of poverty and how this might be changed.

An examination of any of the Rugg textbooks will reveal that, if anything, he was a patriot. Yet his books disappeared from library shelves as quickly as they were placed on them when critics such as the American Legion launched an attack on his motives for writing what they called unpatriotic literature designed to poison the minds of America's youth against capitalism. In the end, it is Rugg whose reputation has never been rehabilitated despite the fact that his counterparts, Counts and Brameld, had far more interest in Marxism and communism than did Rugg, who by all accounts was loyal to the United States, as evidenced in his writings. In terms of his specific contribution to social reconstructionist theory, Rugg was the chief architect of a written philosophy of social reconstruction, a fact unknown to many educators even today.

This "written philosophy" of social reconstruction can be found in Rugg's 1934 report to the NEA. Six months before the July 1934 meeting in Washington, D.C., the Department of Superintendence of the NEA held its winter meeting in Cleveland, Ohio, where Rugg delivered a committee report on the economic and social conditions of the United States and offered recommendations for solutions. The contents of the Rugg report outlined what NEA educators had been discussing for more than three years—disillusionment with unbridled capitalism and the social inequities it produced. In fact, even a cursory look at the 1934 NEA proceedings demonstrates the degree to which educators concerned themselves with the then current crisis of the Depression. What faced the American public in light of the economic crisis was school closings and the threat of federal control over the nation's schools.

The NEA membership was prepared to take up the sword of battle and charge into the fray with enthusiasm and high purpose. One speaker after another pointed to the then current economic mess. In their view, business had had its day in the sun, now it was education's turn; the situation would turn around after a few generations of educating for social justice. After all, those at the helm throughout the 1920s had managed to squander material resources and create economic disparity and disharmony. Through scientific planning, which included surveying the social, economic, and political landscape for the purpose of determining a proper course of action that was fair to all, the United States would once again take its place as a beacon of light. The list of changes was robust and a threat to America's long-standing social order.

In hindsight, the groundswell of support needed for such radical changes was lacking. The economic collapse in 1929 had ushered in great despair and uncertainty; the idea that the nation's teachers could lead generations of students to critically examine social, economic, and political problems with an eye toward reducing economic folly and social inequity seems lofty from a distance of 70 years. However, one must recall the times and the progressive spirit that swept the nation both prior to and after the economic disaster of 1929. Americans in all walks of life believed that the times called for fundamental changes. Hence, when educators met for the NEA's annual meeting in 1934, they were confident in their plans for change. Speakers from John K. Norton to John Dewey made it clear that New Deal policies and programs should include schools and teachers. For their part, congressional leaders, who were called on to sustain the schools through the economic crisis, made it clear that federal aid did not mean federal aid forever. In the middle of this mix was the conservative voice represented by groups such as the American Legion and Daughters of the American Revolution whose self-appointed role was to hold the social framework together until the storm subsided. Once the storm did pass, these conservative groups and others worked throughout the 1940s and 1950s to ensure that educators understood their role—which was not to be agents of change.

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See also Dewey, John; Marx, Karl; Progressive Education and Its Critics

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SOCIAL SYSTEMS THEORY: TALCOTT PARSONS AND NIKLAS LUHMANN

Socialization and education—and the similarities and differences between the two processes—were of interest even to the early social sciences. For many founding figures, socialization theory was at the core of social theory, and there was a tendency for education to be conceptualized as a particular type of socialization. The concept of socialization/education contributed to the overall orientation of classical sociology on structural stability. Until the 1960s, this discipline predominantly focused on the communication of social experiences to the younger generations and on the transmission of culture, norms, and value orientations. Only in the latter part of the 20th century did the concept of socialization/education lose its central theoretical position—both as a consequence of increased scholarly concern with processes of change and transition and of strong empirically based reactions against what had come to be seen as sociology's “oversocialized conception” of humans.

This evolution is also found within the tradition of social systems theory. Talcott Parsons (1902–1979) and Niklas Luhmann (1927–1998) are among the most distinguished contributors to this research tradition, which puts much stress on the relations between particular systems and their environments. Both Parsons and Luhmann have made a number of original contributions to the conceptualization and analysis of socialization and education (often in notoriously difficult prose). But whereas for Talcott Parsons the focus was on value inculcation and “socialization to the grounds of consensus,” Niklas

Luhmann pointed time and again to the improbability of the reliable reproduction of cognitive and normative expectations. In Luhmann's theory of society, therefore, socialization could not be of central importance.

Talcott Parsons

According to Parsons, societies are in need of a broadly shared and internally coherent system of norms and value orientations to be able to maintain themselves. Without this normative system, social cooperation would not be possible and social systems would disintegrate. The stability of the normative system of order—which Parsons called a structural imperative—“explained” several social processes. It was used to define the function of socialization and education.

The maintenance of a normative order requires that it be implemented in a variety of respects: there must be very considerable—even if often quite incomplete—compliance with the behavioral expectations established by the values and norms. The most basic condition of such compliance is the internalization of a society's values and norms by its members, for such socialization underlies the consensual basis of a societal community. (Parsons, 1966, p. 14)

In this regard, both the family and the school class perform an instrumental role for society at large; their function is to transmit this normative structure to new generations and thus ensure a value consensus.

The distinction between socialization and education can be understood against this background. While socialization is limited by the stimuli of the socializing context, education strives for a particular, “unusual” output. Education is action that is intentionalized; it aims to attain something that cannot be left to chance socializing events, something that presupposes coordinating a plurality of efforts. The modes of behavior that one would like to achieve are defined; the situation from which one begins is evaluated (grade level, ability, previous learning experiences); the pedagogical means to achieve what could not occur by itself are chosen. The current large-scale organization of learning situations, school classes, and school systems is only the application of this principle. For societies, socialization suffices as long as social mobility and internal complexity are low. But once a relatively high degree

of complexity is reached, they cannot seem to avoid going beyond mere socialization and mere ad hoc education. Only thus can they reproduce complex forms of knowledge, values, and skills. Only thus can they facilitate processes of specialization and the distribution of roles on the basis of specialization.

Parsons primarily discussed the intentional, explicit inculcation of values and norms. Building on Robert Merton's distinction between manifest and latent functions/structures, the concept of the *hidden curriculum* was later also put to use in this theoretical context. This concept, hidden curriculum, defines a contrast between the expressed or manifest purposes of the official curriculum and the latent functions of the system, which are fulfilled alongside the official curriculum. Accordingly, the hidden curriculum is promulgated by the way schools are organized and operated as much as by explicit teaching methods and content. As such, this concept presupposes a high degree of structural determination of the educational process. It focuses on social and cultural stability, on the transmission of the existing culture, norms, and value orientations to the next generations. Hitherto, however, empirical research has not been able to provide unambiguous evidence about the existence of such structural correspondences between education and the dominant structures and value orientations of modern society.

Niklas Luhmann

For Luhmann, socialization played an ambiguous role within society. As did others, Luhmann criticized Parsons's "oversocialized view" of humans, and he distinguished more clearly between social systems and psychic systems (human beings).

Luhmann depicted socialization as a kind of "order from noise" phenomenon—but even intentional forms of socialization, such as education, cannot ensure that human beings adapt to their social environment in the ways intended. Socialization, for Luhmann, refers to the interplay between social and what he calls psychic systems; it is not the inculcation of societal values and norms, nor the realization of individual talents. How a human being develops, how her "possible world" changes, depends on the social systems in which she is involved (family, peer group, school class, etc.). Selection of individual possibilities occurs within social systems (and possibilities that are not selected will probably waste away); but on the other hand, participation in social systems also creates additional opportunities

for persons. Socialization always depends on what social interaction allows—concrete patterns of social interaction create the difference between possibility and reality, and it is this difference that constitutes the effect of socialization and education.

In modern society, school education reinforces some related distinctions, such as good/wrong, praise/reprimand, and succeed/fail. Educational practices lead to differences; they indicate lines of success and thereby establish the possibility of failure. Despite good intentions, "they transform equality into inequality. They motivate and discourage. They link experiences of success to experiences of success and experiences of failure to experiences of failure" (Luhmann, 1995, p. 207). With Luhmann, we might ask how children react when they are constantly confronted with this option and when they are constantly pressed to conform to their parents' and teachers' expectations. In our postmodern, individualistic society, it makes sense to assume that they will look for some kind of "opting-out" strategy—deviating from normal expectations offers the best opportunities to display one's individuality. They may react with unexpectedly good performance, with nonchalance vis-à-vis evaluation criteria, with humor and irony, with cynicism and sarcasm, with the cultivation of a deviant school or youth subculture, with alternative assessments of qualities and personal merits, and so forth. In other words, classroom education enforces a choice between adaptation and deviance. But it does not (have to) lead to social reproduction.

Seen in this light, it should not come as a surprise that the (traditional) concept of socialization plays only a marginal role in Luhmann's work. It is hardly referred to in the monographs, in which he presented the building blocks of his systems-theoretical framework. Moreover, Luhmann's interpretations of socialization and education are connected with a rather pessimistic outlook on the future of the society we are now all familiar with. The dominant or primary social systems in modern society do not support one another; the opportunities that our contemporary society generate, especially in the field of education, might endanger its own structural characteristics. In short, given the way we currently organize processes of socialization and education, modern society might become a victim of itself.

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See also Complexity Theory; Hidden Curriculum; Loose Coupling; Modernization Theory; Socialization

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SOCIALIZATION

Socialization refers to how new members of a group are assisted by older members to take over or internalize the values and standards of that group so that eventually they will become functioning members of it. The initial and most important socialization experiences take place in the family, where parents are responsible for ensuring that their children are able to function independently in the wider social context, outside the protective cocoon of home. Socialization continues, however, throughout the life span as individuals find themselves in new settings, with some new norms needing to be learned—those of the peer group, the work place, marriage and family, and older age, for example. This entry will focus on primary socialization in the family, describing the various domains in which socialization occurs, and it will also give an account of the efforts of researchers, particularly psychologists, to understand how these domains function. The entry will not attempt to demarcate socialization from the closely related process of education; some writers treat the terms *socialization* and *education* almost as synonyms; others treat education as a special type of socialization; and some see the difference between the two being that education is consciously engaged in and its aims are or can be explicitly stated and manipulated, whereas socialization often can take place without the agents or subjects of it being aware.

The process of socialization does not involve the incorporation of, or wholesale adoption of, the values of others. Although this position was advanced by psychoanalytic theorists who characterized parental values as being introjected, research has made it clear that children are active in the socialization process.

They accept or reject parent teaching and even, on occasion, successfully modify parents' own values.

Evolutionary, Genetic, and Socialization Interactions

The impact of socialization practices is determined to a considerable extent by the way the human species has evolved: Over the course of evolutionary history, human beings have developed certain predispositions, and these predispositions determine the relative ease with which different beliefs, values, or behaviors can be instilled. For example, humans have evolved to need physical contact and comfort from a protective caregiver as a way of coping with distress and anxiety, and experiences in this domain have been argued to be an important, if not the most important, foundation of social development and socialization. The evolved need to be part of a social in-group is another feature that makes children particularly willing to model their behavior after that of other members of the group.

In addition to genetic features shared in common, there are also individual differences in genetic makeup—and a considerable body of research indicates that these genetic features and socialization experiences interact in determining children's development. Much of the focus has been on interactions of parenting with temperament, the latter a biologically based proclivity of the child that includes behavioral features such as level of ability to adjust to routines and deal with frustration, degree of fearfulness and timidity, and the capacity to self-regulate emotion. Many studies have indicated that children with problem temperaments are more negatively affected by adverse parenting (e.g., highly controlling, rejecting, and hostile) than those with more benign temperaments. There is a tendency for children with problem temperaments who have experienced harsh parenting, for example, to be more aggressive and noncompliant than children with easy temperaments who have been exposed to similar levels of parent harshness. The study of interactions has been extended to an identification of genes associated, for example, with aggression and sensation seeking, as well as with anxiety and depression: Again, children with these genetic markers are more adversely affected by maladaptive parenting than are children without the markers. Recently, it has been suggested that children with problematic characteristics are not only more likely to be adversely affected by negative parenting but may also be more

positively affected by good forms of parenting. In other words, children are differentially susceptible to both positive and negative aspects of parenting, with some more easily influenced by both kinds of parenting than others.

The existence of individual differences in reactions to socialization strategies underlines the fact that these strategies must be tailored to the child's characteristics. Children respond somewhat differently to the same approach, and so there is no single strategy that works for everyone. Therefore, effective agents of socialization have to know how their children will respond and tailor their interventions accordingly. Researchers use terms such as authoritarian, authoritative, warm, responsive, and punitive, and on average, these terms are useful in describing dimensions of socialization. However, there is variation in reactions to these characteristics of parenting—for example, in what is perceived by an individual child to be warm or punitive. This variation is determined not only by genetic differences described above but by variables such as the child's age, sex, past history of socialization, and comparisons with the way others are treated. Thus, it is the meaning a child assigns to a socialization strategy that becomes central in determining its effect.

Domains of Socialization

There are different approaches to socialization, described below. Most would agree that an important component of each is the existence of a warm and accepting relationship between child and parent. Thus, the context in which a socialization strategy is employed has considerable impact on its effectiveness.

Control

Most research has focused on children's misbehavior, that is, when parent and child are in conflict, with the child wanting to engage in what the parent considers an antisocial or unacceptable action. Because parents have access to more physical and psychological resources than the child, they are in a position to impose consequences for misbehavior. There have been two somewhat different approaches to the study of discipline, although they are certainly complementary. One approach focuses on parenting styles and the other on discipline strategies.

Parenting Styles

In the 1960s, Diana Baumrind proposed a distinction between two parenting styles—authoritarian

and authoritative, a distinction that continues to guide the thinking of socialization theorists today. Both styles involve control, but in the case of authoritarian parenting, the control is rigid and unyielding—children are offered no choice, punishment levels are high, and no explanation is offered for why their behavior should change. In contrast, with authoritative parenting, the control is firm—limits for acceptable behavior are set, but parents are responsive and sensitive to the needs and reasonable wishes of their children. This form of control is confrontive, in the sense that punishment for misdeeds is salient, but children's autonomy is not threatened because they can choose to comply or not comply and negotiated outcomes are a possibility. Additionally, authoritative parents tend to be high in warmth and acceptance of their children and less hostile and rejecting. Authoritative parents are more successful than authoritarian parents as agents of socialization, particularly in Western European cultural contexts where authoritarian parenting is less accepted and more likely to be associated with rejection, and where individual autonomy is highly valued.

Other forms of control have been proposed, specifically behavioral control and psychological control. The first involves setting of rules, regulations, and restrictions as well as monitoring of the child's actions through inquiry and observation. The second refers to control that undermines the child's autonomy and includes intrusiveness, guilt induction, and love withdrawal, as well as lack of responsiveness to the child's psychological needs. Not surprisingly, the outcomes for the child of psychological control are more frequently (although not always) negative, whereas those of behavioral control are positive.

Discipline Strategies

The second approach to understanding how children's antisocial actions can be modified involves the study of discipline strategies, that is, the use of disapproval, withdrawal of material rewards, and physical punishment. Here the research indicates that parents who use minimal amounts of punishment—enough to gain the child's attention and encourage compliance—and who couple it with explanation will be most successful. Another focus of researchers who study discipline strategies is physical punishment, with cultural studies suggesting that corporal punishment is somewhat less detrimental in its effects in countries where its use is seen as more

normative and acceptable and where it is not a sign of parental rejection.

Although most research on control has focused on children's misdeeds, parents also use their control of resources to reward positive social behavior. Although this seems a better way of encouraging prosocial action, it can have unexpected negative outcomes. Thus, conditional positive regard, that is, the making of approval contingent on particular actions, can undermine the child's sense of autonomy and feelings that these actions have been freely chosen.

Protection

Frequently cited as the cornerstone of socialization, the relationship between caregiver/protector and child is central to the socialization process. Attachment theory as developed by John Bowlby and Mary Ainsworth has as a central tenet that caregivers who are responsive to their children's distress and safety needs have children who feel secure. These children learn to regulate their own distress, to feel empathy for the distress of others, and to trust that the caregiver's requests for compliance with societal norms are in their own best interests.

Mutual Reciprocity

The association between responsiveness to the child's needs and the child's compliance is assumed by attachment theorists to be mediated by the child's secure attachment. However, responsiveness and compliance can also occur outside a situation involving distress, calling on the inborn tendency of humans to reciprocate the actions of others. When parents comply with children's reasonable requests (e.g., to play), their children, in turn, have been shown to be more likely to comply with their parents' requests. Thus, a system of willing cooperation and shared common goals is set up, and socialization can occur in the absence of conflict or distress.

Group Participation

Albert Bandura and Richard Walters argued many years ago that the primary form of learning for social animals was not through experiencing response consequences but through observation, that is, by watching others. Children learn to be aggressive, to be helpful, to resist temptation, or to value any number of behaviors simply by observing other people engaging in those actions and then reproducing them. The desire to be like others is seen in children's preference for members of their

own group, their distress when they cannot reproduce the actions of the group, and their enjoyment when taking part in family and classroom rituals and routines. Particularly in cultures where there is no formal school system, children deliberately attend to the activities of adults to be able to participate in these activities, thereby gaining a sense of social identity. Indeed, learning through observation and ultimate participation leads to routinized and automatic actions, performed with little questioning.

Guided Learning

Children can be engaged in discussion of, or taught, values and norms independent of their own actions. Research has demonstrated the importance of teaching children by scaffolding their learning and working within what the psychologist Lev Vygotsky called their "zone of proximal development." Successful teachers adjust their guidance to the child's changing levels of skill and understanding, as well as select tasks that the child cannot yet perform independently but can master with the aid of someone who has greater experience. The importance of these features of guided learning is evident in attempts to facilitate moral reasoning where arguments that are just one stage above the child's present level are most successful.

Conclusion

Central to an understanding of socialization is the fact of differences between children in how they respond to similar socialization interventions. Within each of the domains described in this entry, children can assign different meanings that affect their reactions to parenting in that domain: What is comforting to one child is not comforting to another; what is a zone of proximal development for one child is not for another. Socialization is a complex process. It is, however, an essential process for ensuring that individuals can function optimally in the various social groups they encounter throughout their lives.

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See also Adolescent Development; Education, Concept of; Social Systems Theory: Talcott Parsons and Niklas Luhmann; Vygotsky, Lev

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SOCIOLOGY OF KNOWLEDGE

See Edinburgh School of Sociology of Knowledge

SOCRATES AND SOCRATIC DIALOGUE

The historical figure Socrates is said to have lived in the period 470 to 399 BCE, in the city of Athens, Greece. Plato (427–347 BCE) immortalized his teacher, Socrates, in more than 30 dialogues, which feature the pedagogue in conversation with various interlocutors.

Scholars divide Plato's dialogues into three periods. Those belonging to the early period were written before Plato's first trip to Syracuse (388 BCE), when he was nearly 40 years old. These include *Apology*, *Crito*, *Protagoras*, and *Gorgias*. The middle-period dialogues were apparently composed between 388 and 367 BCE, the year of Plato's second trip to Syracuse, and these include *Meno*, *Symposium*, *Republic*, and *Theaetetus*. Dialogues from the later period include *Sophist*, *Statesman*, *Philebus*, and *Laws* and were written between 366 BCE and Plato's death. The early dialogues are often referred to as the "Socratic" dialogues, as Socrates is the central character in them.

This entry first examines some important characteristics of Socratic dialogues and then asks whether Socrates employed a single method

throughout his teaching. Because the goals and questioning procedures he used varied with the subject and the interlocutor, the Socratic dialogues can best be seen as illustrating the virtues of dialogic teaching.

Characteristics of the Socratic Dialogues

The Socratic dialogues have notable characteristics. First, typically they begin when Socrates raises a question. The interlocutor responds with a statement that generally provokes a further question from Socrates, and so the conversation continues. Because they follow this format, and because those who are involved sometimes appear to learn things as they speak with one another, the Socratic dialogues provide the classic model of dialogical teaching and learning.

Second, the exchanges between the individuals in the dialogues have a particular character and, as a consequence, draw attention to the power of dialogical teaching. In fact, we may justifiably thank Plato, via Socrates, for showing us that dialogue may teach more effectively than monologue, at least in some circumstances. Indeed, the interchanges between Socrates and his interlocutors are not idle conversations about inconsequential topics. We see the characters engaged in serious reflection on challenging questions such as these: How is knowledge defined (*Theaetetus*)? Can virtue be taught (*Meno*)? What is the definition of justice (*Republic*)? Should one fear death (*Phaedo*)? Time and time again, the interlocutors, and sometimes Socrates himself, are forced to recant their claims in the face of failed arguments or endorse new claims in the face of convincing ones.

A third characteristic of Plato's Socratic dialogues is that they engage readers (or listeners) in the same kind of conversation that they are reading or hearing. Consider the case of *Phaedo*. As we read, we witness a dramatic moment in the life of Socrates, namely, his last gathering with some friends, at the end of which he drains the cup of hemlock. In reading or listening to it, we are drawn into the dialogue. Once there, we join the narrator on his perch, looking as he looks, questioning as he questions. We let him tell us about Socrates—about why he does what he does, about who he is. We live Socrates's last moments in the narrator's company. So situated, we raise questions about this powerful, moving teacher, his situation, his remarks, and ourselves. And we reflect on possible answers as if

we are in conversation with Socrates and are in the dialogue itself.

Goals of Socratic Dialogue

Because the Socratic dialogues engage us in questioning, not simply reading or listening to other people question one another, one might wonder whether Socrates follows a method by which he accomplishes this. Some argue that the “method” is that of elenchus—a form of argument in which first, a statement in answer to a question is given. Socrates then secures agreement to further premises. Next, he and his interlocutors agree that the further premises contradict the initial statement. Finally, they conclude that since the premises are true, the initial statement is false, or some such. However, while it may seem that Socrates follows the method of elenchus in his dialogues with others, this conclusion is far from self-evident. There is also the possibility that we, as readers or listeners, are compelled by the dialogues because *we* are drawn into following some method. Perhaps, then, there is no single “Socratic method” in the dialogues.

So, then, a closer look is required. To begin with, Socrates actually appears to have different aims in different dialogues, even across those attributed to the same period. One might argue, with Richard Robinson, that in the early- and some middle-period dialogues, Socrates aims at the moral reform of his interlocutors. Or one might argue that Socrates is not so much interested in reforming their morals as bringing them to a state of *aporia*, that is, to the point where they recognize that their beliefs are mistaken and that they are ignorant of what they thought that they knew. Such seems to be his goal with the slave boy in the *Meno*. At the outset of the conversation with Socrates, the boy believes something false, as the pedagogue demonstrates. When the slave finally admits that he does not know what he thought he knew (84a), Socrates tells Meno that the boy has “progressed.” Here there is no evidence that the boy’s moral behavior is, or was, wanting.

Then again, one might also argue, with Gregory Vlastos, that Socrates aims to “correct false beliefs, confused ideas, and wrong ways of thinking.” For example, he seems eager to persuade Meno that learning proceeds by “recollecting”—by drawing ideas out of oneself that were heretofore unrecognized (see *Meno*, 84a–b). Socrates seems not to be content to see Meno acknowledge his false beliefs.

Meno’s celebrated paradox (*Meno*, 80d) states that if you already know the answer to the question you are asking, then nothing can be learned by asking; and if you do not know the answer, then you will not know what to look for. In response, Socrates persuades Meno that, contrary to Meno’s claim that one cannot learn anything by asking questions, learning is possible because it proceeds by recollection.

Notice that neither of the aims mentioned by Robinson and Vlastos includes that of resolving the issues that motivate the conversation between Socrates and his interlocutors in the first place. In short, Socrates’s aims seem to vary across the dialogues and answering the questions on the table seems not always to be the primary concern.

Next, let us consider the issue of procedure. Can Socrates be said to follow a procedure in the dialogues—a sequence of steps that he repeats again and again, such as those described by the elenchus? If one looks at Socrates as he questions Hippocrates on the effect of knowledge (*Protagoras*, 311b–414c), Polus on the greatest of all misfortunes (*Gorgias*, 469a–475e), or Theaetetus on the proposition that knowledge is perception (*Theaetetus*, 151e–164b), he seems to have answers in mind—answers that he wants his interlocutors to reach. Indeed, he seems to envision the entire line of questioning at the outset of the discussions. For he frequently puts the question in such a way that only one response appears reasonable, thereby forcing this answer rather than others. So one might ask, “Does Socrates have the answers in mind to the questions he asks and therefore proceeds by envisioning a whole line of questioning, elenchus style?”

Yet Socrates’s questioning of his interlocutors varies a great deal. Indeed, when questioning the same person, he sometimes seems to have an answer in mind and a series of questions envisioned, yet at other times, he seems as much at sea as they do. For example, he persuades Meno that it is right to “inquire into something that one does not know” (86c). He and Meno then set out to answer the question: What is virtue? Socrates says he does not know the answer, and Meno’s position is similar. From here on, there are false starts, inconclusive attempts, and the definition is never fully reached, although they do conclude that virtue is advantageous (87e) and a sort of wisdom (89a). But is it knowledge? If so, it must be teachable. Yet Socrates knows no teachers of virtue, and so they conclude that virtue cannot be knowledge. But what is it?

Here we have a case in which Socrates seems not to have an answer in mind, nor does he envision a line of questioning from the start to reach it. His questioning takes different tacks: In vain do he and Meno secure agreement on premises that support a conclusion about the definition of virtue. Eventually, Socrates says to Meno, “You and I are not much good . . . our masters have not trained us properly” (96e). While some accuse Socrates of being disingenuous, there is little evidence that he believes he knows the definition of virtue and is withholding it from Meno. Indeed, the floundering that besets their attempts to discover the definition suggests that on the contrary, they are proceeding by trial and error. Furthermore, error is not always detected as a consequence of falsifying previously established premises; that Socrates knows no teachers of virtue does not mean that virtue cannot be taught.

Thus, we begin to suspect that Socrates does not follow a set method of investigation—“the Socratic method.” We see that the outcomes of the Socratic dialogues vary, just as do the aims and the questioning procedures. For example, Meno and Socrates end their conversation in a state of *aporia* over the definition of virtue (*Meno*, 100b). In the *Phaedo*, conversation with his interlocutors seems to persuade Socrates that death is not to be feared, but it does not seem to have that effect on Crito (*Phaedo*, 115c–d). Likewise, while Polus gradually becomes persuaded that the greatest good is not power (*Gorgias*, 480e), Callicles is not convinced by the arguments that sway Polus nor by any others advanced in the conversation, although he several times defers to Socrates, perhaps out of fatigue (e.g., 501e). Finally, Theaetetus and Socrates travel a path together seeking a definition of knowledge. Here, there is wandering hand in hand, so to speak, but the quest ends in a state of *aporia* for both. No definition of knowledge proves tenable, despite the fact that both Socrates and Theaetetus display plenty of zeal for the search.

In short, there are insufficient grounds for concluding that Socrates pursues a method in his dialogues with his interlocutors. And how could it be otherwise? For each interlocutor is a different person, and Socrates himself becomes a different person with each of them. Indeed, the Socratic dialogues teach us that learning through dialogic exchange proceeds in a unique way each time and that search for an effective method of dialogic teaching is futile.

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See also Dialogue; Plato

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SOPHISTS

In 5th-century BCE Greece, there emerged a new class of teachers, the first generation of Sophists, including, Protagoras of Abdera, Gorgias of Leontini, Hippias of Elis, Prodicus of Ceos, and others. They are sometimes called the “older Sophists” to distinguish these pioneers from those who would later lay claim to the title beginning in the 4th century BCE. The Sophists hailed from different regions of Greece and had a variety of intellectual interests and diverse curricula for their students. But they were united in that they believed that they possessed specialized expertise in teaching, and they offered an education that promised to help students reach new intellectual and social heights. Because they subjected religious, political, and social customs to scrutiny, some Greeks branded them subversive and harmful to both the youth and the society in general. At the same time, however, some Greeks welcomed them, including Pericles, the

great Athenian statesman. The Sophists' celebration of the value and power of learning, their intellectual advances, and their innovations in pedagogy and curriculum were so profound that it is difficult to overstate their importance to Western educational theory and practice. This entry describes the historical context in which the Sophists emerged, their role in education and public affairs, and the evolution of the term *sophist* during the 5th and 4th centuries BCE.

The Sophists arose in response, at least in part, to two cultural shifts in Greece. First, the 6th and 5th centuries BCE featured a flourishing of intellectual activity. There were advances in science, literature, philosophy, mathematics and a variety of other fields. Prior to the emergence of the Sophists, formal Greek education was limited to what would now be called "elementary education," probably ending around the time of puberty, and involving only reading, writing, mathematics, music, and physical education. Many young men, however, wanted to learn about the new intellectual developments of their day, and a market emerged to satisfy them. Sophists began to travel to various cities—especially Athens, where the thirst for learning became a defining characteristic of the population—offering lessons to young men who sought them.

Second, the advent of democracy in Athens resulted in the demand for a particular new set of skills. Political and social prominence was no longer limited to the descendants of the king, nor to an aristocratic class. Social mobility became a possibility for a far greater number of individuals. Indeed, at least in theory, any citizen who could persuade others during collective deliberations could play a prominent role in the city's leadership and become part of the city's elite. In addition, Athenian justice depended on private individuals prosecuting others—there was no public office of legal representatives in Athens. Any Athenian citizen could attempt to make a name for himself by prosecuting another citizen. Many Sophists recognized that persuasive public speaking could be improved with technique and practice. They, therefore, developed and offered lessons in oratory that were enthusiastically sought by young men.

To whatever extent the Sophists tapped into a nascent desire for political and social advancement, on the one hand, or a thirst for learning, on the other, the Sophists enabled these desires to flourish—they both served the market and enlarged it. It was only a brief historical jump from these itinerant

teachers who met in marketplaces, gymnasia, or were hosted in the homes of the wealthy, to the following generation, in which their students, in the early 4th century BCE, established the first schools of higher education, as they would be called today. In the late 390s BCE, Isocrates, whom the oratorical tradition places as a student of Gorgias, opened his school. Plato, whose deep engagement with Sophist thought is attested throughout his dialogues, opened the Academy about five years later.

As a class of teachers seeking out and competing for students, the Sophists developed particularly engaging promotional displays. They gave public lectures conveying innovations in speech composition or content, offering a sample of the intellectual and/or oratorical prowess that students might acquire. These displays sometimes involved a particularly moving retelling of a moral tale—such as Prodicus's story about Heracles's decision to choose the difficult path to virtue rather than the alluring, easy path to vice, and Hippias's speech about Nestor's advice on the noble pursuits for the young—or they might argue a counterintuitive or countercultural idea, such as Gorgias's *Encomium to Helen*, in which he dazzled his Athenian audience with his novel prose style as much as his defense of Helen. In addition to speeches, a display might involve fielding questions with clever, erudite, and otherwise impressive responses.

Students who attended the Sophists' regular lessons might have listened to lectures, recited speeches, or engaged in the analysis of both the form and content of poetry or speeches. Some Sophists would question their students; indeed, Diogenes Laertius credits the invention of "Socratic" questioning not to Socrates but to Protagoras. Others provided lessons in debate, requiring their students to argue either side of a question, another innovation Laertius credits to Protagoras. The duration of study seems to have been varied, and it is likely that there were different fees for short courses or lectures and longer associations. (Plato's Socrates quipped that he could only afford Prodicus's cheaper, shorter lecture on the precise use of words.) On the other hand, some students would have experienced a prolonged apprenticeship, traveling with a Sophist from city to city, and some hoped to become Sophists themselves.

The actual curriculum offered by individual Sophists varied, as they had different interests and specializations. Most Sophists taught oratory and debate. Many promised to teach excellence or virtue, especially pertaining to politics and citizenship. Most

collected fees for their teaching, and Protagoras, Gorgias, Hippias, and Antiphon (b. ca. 479 BCE) were reputed to have acquired great wealth through their teaching. Prodicus specialized in the precise use of words. Others focused on literary criticism, ethics, psychology, religion, or other subjects. Plato's Protagoras disdainfully remarks that other Sophists teach their students traditional subjects like calculation, astronomy, geometry, and music, subjects on which he would not waste students' time. In general, Sophists were studying a wide range of topics. As teachers who invited students to participate in an intellectual journey, it is likely that they would have taught the subjects in which they themselves were immersed.

The question of what the Sophists taught depends, however, on the definition of "Sophist," a problem that has proven difficult to settle. Who was a Sophist? The root of the term *sophistēs* is *sophos* (wisdom). Until the 5th century BCE, *sophist* was a term of praise, often used for poets, whom the Greeks regarded as teachers. By the 4th century BCE, *sophist* was generally a term of disparagement. For example, Aristotle wrote that Sophists teach social and political matters without practicing or having any experience of them, and Xenophon warned that Sophists defrauded their students.

Based on the 4th-century BCE depictions of Sophists, one might define a sophist as a professional teacher who offered lessons for pay in, at a minimum, oratory or political affairs, but who was not himself politically active. Their lack of political experience, and the improbable boasts about the benefits of their lessons, led people to view Sophists with suspicion. But it is not clear that the definition of *sophist* that took shape in the 4th century BCE is applicable to the older Sophists. Several of the older Sophists were politically active. Pericles was said to have asked Protagoras to write the constitution for the Athenian colony at Thurii. Gorgias served as an ambassador, negotiating an alliance between Athens and the Leontinians. Prodicus and Hippias too seem to have served as ambassadors. There remains scholarly controversy about whether the historical Antiphon—political leader, orator, and sophist—was a single person or three different people. But if he was indeed the same person, he was an Athenian Sophist who was a leader of the oligarchy—a political role for which he was later executed.

Not only were the sophists more experienced in the affairs of public life than the later criticism

would suggest, it is also not clear that they should be viewed strictly as paid teachers. While most of the Sophists did seek fees for their lessons, others apparently did not. Socrates famously accepted no fees and was yet identified as a Sophist. Later philosophers like Plato suggest that such a label conflated Sophists and philosophers. But such distinctions may have emerged after or late in Socrates's lifetime. Furthermore, scholars have debated whether Gorgias should be considered a Sophist, since he seemed to be exclusively concerned with teaching oratory. Yet it is possible that these distinctions evolved later to distinguish the single, diverse group of Sophists in the 5th century BCE. In short, the range of meaning of *sophist* in the 5th century BCE was quite broad, probably encompassing many intellectuals who consciously educated young men. Ultimately, what united the older Sophists was that they kindled a desire for learning in young men, they created possibilities for young men to continue their education, they developed innovations in pedagogy and curriculum, and they led a cultural transformation that laid the foundation for the popular acceptance of learning beyond elementary education.

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See also Isocrates; Plato; Socrates and Socratic Dialogue

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SPECTATOR THEORY OF KNOWLEDGE

During the course of Western intellectual history, many philosophers have grappled with the problem of how it is possible (or if indeed it is possible) for us

to gain knowledge about the external world. A number of rival epistemological theories have been developed in response to this challenge, and until recently, the major contenders have possessed at least one feature in common—they have depicted knowers as passive absorbers of input from the external environment. These theories have given different names to this input, and they have given different accounts of what happens after it has been absorbed—and in some of these accounts, the mind of the knower is far from being passive. But crucially, at the initial stage of reception of the input, the mind is not active. And—perhaps even more crucially—neither is the body. In short, the knower is a spectator, an onlooker. This entry first examines this conception as framed by Plato and the empiricists John Locke, and others. It then considers the objections to the spectator theory that were raised by William James and John Dewey, who emphasized an active role for the knower and argued that such a conception has important implications for educational practice.

The American psychologist and cofounder of the philosophical movement of pragmatism, William James, a staunch critic of spectator theories and perhaps the person who actually coined this label for them, wrote as follows in an early review of Herbert Spencer's theory of mind:

I, for my part, cannot escape the consideration forced on me at every turn, that the knower is not simply a mirror floating with no foothold anywhere, and passively reflecting an order that he comes upon and finds simply existing. The knower is an actor. . . . In other words, there belongs to mind, from its birth upward, a spontaneity, a vote. It is in the game, and not a mere looker-on. (James, 1878/1992, p. 908)

James's metaphor of the passive, floating mirror is brilliant and suggests the essence of his criticism (of which, more later); but it is only one of a long line of metaphors that have been used by philosophers who have developed spectator epistemologies. Two examples will have to suffice.

The earliest Western philosopher to warrant discussion is Plato who, in his masterpiece *The Republic*, used the famous Allegory of the Cave to illustrate his view about the acquisition of knowledge. Stripped of some of the detail, Plato described a group of prisoners chained in a cave so that their backs were toward the entrance, and they could not see the passing parade (the realities) outside—they could only watch the shadows that were cast on the back wall, shadows that they mistakenly took to be

the realities. To gain genuine knowledge, the shackles had to be removed so that the prisoners could turn their vision in the other direction. Throughout, these prisoners (who, of course, represent most of us) were passive viewers—after all, they were chained; for them to gain knowledge, their vision had to be directed in the right direction, but they did not have to go out and explore or conduct experiments or take action in the world. (And in this context, it is worth noting that, since Plato's work, there has been a tradition of discussing the gaining of knowledge in visual terms—even today, we still commonly use expressions such as “I see the point you are making.”)

In *The Republic*, in other less metaphorical passages, Plato outlined the educational program that enabled at least the rulers to have their vision turned so that they could gain genuine knowledge—it consisted, in its crucial final stages, of a regimen of mathematics and metaphysics that equipped these individuals with the ability to think abstractly so that they could perceive the (metaphysical) realm of the ultimate realities, the “forms.”

A quite different spectator theory—or, more accurately, family of theories—was developed by the empiricist philosophers John Locke, David Hume, and others in the late 17th and 18th centuries (forebears of an epistemological orientation that is still alive today). Locke conceived of the mind of the knower as an “empty cabinet” or as a blank sheet of paper; in a much-quoted passage he wrote,

Let us then suppose the mind to be, as we say, white paper void of all characters, without any ideas. How comes it to be furnished? Whence comes it by that vast store which the busy and boundless fancy of man has painted on it with an almost endless variety? Whence has it all the materials of reason and knowledge? To this I answer, in one word, from EXPERIENCE. (Locke, 1689/1947, p. 26)

On Locke's account, experience is something that *happens* to a knower; the sense organs are the conduits by way of which “sense data” (to use the modern terminology) enter the mind and are “painted” on it. (Open your eyes, and you see; if you have functioning ears, you cannot help but hear; if you have a nose, you detect odors. These experiences happen to you.) Here experience is not conceived as involving intervention, experiment, or action taken in the world; it is after the mind is “furnished” with simple ideas that mental activity (of a sort) takes place.

On what grounds did William James object to all forms of the spectator theory? Under the influence of Charles Darwin's theory of evolution, he rejected the dualism that they seemed to take for granted—spectator theories assumed that the knower (or the knower's mind) was a viewer or observer of nature and not a participant in it; in other words, they set up the philosophically intractable dualism of “mind versus nature.” But in James's view, Darwin had established that mind—including, of course, the capacity to reason—evolved *within* nature and served a vital biological function; namely, it helped us survive within nature by being able to predict the consequences of our actions and by being able to formulate plans or courses of action by means of which we could “escape the better from destruction” (see especially *Talks to Teachers on Psychology*, chap. 3). In other words, as James memorably put it in the passage quoted earlier, the knower “is in the game, and not a mere looker on.”

James (1899/1925) conveyed this “biological conception of mind”—according to which man is not a spectator of nature but “is primarily a practical being, whose mind is given to him to aid in adapting him to this world's life”—to teachers, in his popular lectures and in Chapter 3 of his equally popular book based on them, *Talks to Teachers on Psychology* (p. 25). He was convinced that it was “the point of view likely to be of greatest practical use to you as teachers” (p. 24).

John Dewey, writing under the influence of James's psychology, stressed that to gain knowledge, the knower had to act in the world—make changes in it. He developed this point at length, and in the context of his specific criticisms of the “spectator theory,” in the chapter on “The naturalization of intelligence” in his *The Quest for Certainty* (1929/1988), where he stated, “Nature is capable of being understood. But the possibility is realized not by a mind thinking about it from without but by operations conducted from within” (p. 172). In his educationally oriented writings, he also made a direct link between epistemology and methods of teaching; and he traced the origin of dysfunctional, traditional teaching methods—that suppressed student activity and enforced passivity in the classroom—directly to the acceptance of the spectator theory of knowledge:

In schools, those under instruction are too customarily looked upon as acquiring knowledge as theoretical spectators, minds which appropriate knowledge by direct energy of intellect. . . . Something

which is called mind or consciousness is severed from the physical organs of activity. The former is then thought to be purely intellectual and cognitive; the latter to be an irrelevant and intruding physical factor. (Dewey, 1916/1958, p. 164)

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See also Associationism; Dewey, John; Evolution and Educational Psychology; James, William; Locke, John; Plato; Radical Constructivism: Ernst von Glasersfeld; Spencer, Herbert

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SPENCER, HERBERT

Education: Intellectual, Moral and Physical, by Herbert Spencer (1820–1903), originally appeared as four essays in various British quarterlies between 1854 and 1859. Reprinted as a book in 1864, Spencer's essays on education also became very well-known on the Continent, and the book was the most widely read text on this subject in the United States during the second half of the 19th century. Spencer stressed the need to substitute a scientific education for a classical one and the importance of teaching children without the use of coercion and rote learning. His views drew on those of the Swiss educationist Johann Pestalozzi (pp. 115–129) and on the experience of his father William George Spencer, who was a scientific publicist and teacher.

The Educational Value of Knowledge

The foundations of Spencer's (1864) educational theory were the answer to his question, “What

knowledge is of most worth?" (p. 21). He argued that what commonly passed for education among contemporary pedagogues was insubstantial and decorative. Their views had emphasized rhetoric and other refinements drawn from the classics while ignoring the practical arts that would improve the well-being of the individual and the community. In Spencer's view, the fine arts and belles lettres had to be subordinate to the kinds of applied knowledge that support civilization (p. 74). He also argued that although learning the classics might contribute to the training of various mental faculties ("formal discipline"), the sciences were at least equally beneficial—and had the added advantage of being practically useful. (Spencer's case here helped earn the sciences a place on the school curriculum, where they gradually replaced the classics.) While Spencer acknowledged that a classical education could benefit its possessors by making them more fluent and masterful in speech, this would be a mere competitive advantage to the individual and would not constitute a genuine benefit to society.

Spencer deprecated competition, and rather than advocating a kind of "educational Darwinism," his notion of utility was based on a belief that common welfare required that each individual be equipped with knowledge that would increase his or her commercial value and the material welfare of people as a whole. If education did not produce these effects, then it was simply decorative. Spencer was arguing that an education in the classics or one of the humanities, such as history, was equivalent to Orinoco Indians painting their bodies while neglecting to clothe themselves or to a barbarian people filing their teeth when it would be more utilitarian to leave them unmodified. He was particularly struck by the account of the explorer John Hanning Speke, whose African attendants removed their handsome goatskin mantles when it rained and, as a result, walked about naked and shivering. To Spencer, this was a prime example of a general human preference for decoration over utility, and unless this tendency was checked by education, even "we," the civilized, would care more for the fineness of a material than its warmth (Spencer, 1864, pp. 22–26).

Spencer believed that, in any culture, the possession of fine decoration might give its possessor a competitive advantage. However, whether this decoration was a fine garment or classical learning, Spencer would not permit it: Getting ahead by use of a cosmetic advantage had no real bearing on what he called the "arts of life." The classics and humanities

were particularly superficial or cosmetic because in addition to being mostly decorative, they purveyed only dead knowledge about past cultures. This was a memory of what had been useful but which could no longer aid human welfare because social evolution had changed the utilities.

Instead of focusing on dead knowledge, a modern curriculum should consist of subjects that might enhance a person's life. Putting this under Spencer's (1864) headings, education should accomplish the following:

1. Make people more self-preserving
2. Contribute to their "necessities," or putting this in more modern terms, to the acquisition of skills and knowledge required to earn a living
3. Help them rear and discipline offspring
4. Maintain social and political relations
5. Encourage activities that would help people enjoy leisure. (p. 32)

This list would encourage the teaching of a wide array of practical subjects, including commercial ones, engineering, child psychology, sociology, political science, and sport, while excluding much of what the 21st century would regard as the liberal arts. Not only was Spencer's educational canon narrow, it was accompanied by a set of priorities that was heavily biased in favor of commercial and scientific studies. For example, teaching industrial activity had priority over the teaching of parenting skills, and that, in turn, was favored over civics classes. Many of these preferences were expressed aphoristically. The study of ethnology, which deals with contemporary peoples, was better than the study of Aeschylus. Human biology always had more value than the classics, and in general, the sciences were intrinsically good, while the teaching of Latin and Greek had only a marginal value in providing the basis of learning one's own language (Spencer, 1864, pp. 33–63).

It is important not to confuse Spencer's (1864) educational values with more recent liberal ones that are tinged with Kantianism, or which posit individualism as the goal of education. He believed that the notion of leaving children to find their own way—a system of complete *laissez-faire*—was a *reductio ad absurdum*. Spencer's rationale here was biological: Culture must be imposed on students because humans were very complex beings whose

development was slow compared with that of other animals. Therefore, they were dependent on their parents for lengthy periods of time and needed structure as well as knowledge (p. 113). The fact that Spencer's general list of subjects for the curriculum included instruction on how to discipline children and how to maintain "proper" social and political relations should warn the reader that Spencer's values are not analogous to general libertarian or anarchist ones but are those of a Victorian reformer who desired that individual development be integrated with social and political institutions. It is, of course, true that his later political writings militated against an enlarged or socialist state, but, even then, he believed that, provided the state stayed within its traditional limits, people should be educated to respect authority and a constitution. (Spencer's politics are complicated if taken out of their historical contexts. In the 1850s, when he wrote *Education*, he was known for his advocacy of land nationalization—a form of socialism—in *Social Statics* [1851]. In 1884, when many of his fellow liberals were beginning to turn to state socialism, he opposed this movement in *The Man "Versus" the State* on the grounds that forced social change was likely to be ineffective or even harmful.)

The utilitarian quality of Spencer's *Education* was based on an individualistic utilitarian calculus because Spencer emphasized the *social* utility of an education as much as he did its personal benefit. Rather than being a moral philosophy like the theory of Jeremy Bentham, Spencer's utility was more in the way of philistinism of the kind that so troubled Matthew Arnold in *Culture and Anarchy*. From an Arnoldian perspective, Spencer was a spokesman for the mid-19th-century industrial ethos. From this perspective, an education is valuable only when useful in sustaining society. This social and economic injunction was functional and should not be confused with "decorative" qualities. (The only nonfunctional exception that Spencer allowed in his education was preparation for leisure.)

A Paradoxical Influence

The restrictive nature of Spencer's *Education* makes its legacy problematic. Given that Spencer was hostile to the kind of liberal arts that developed in the United States where his text was so widely disseminated, his putative influence is paradoxical. It could be the case that Spencer, like Locke in the 18th century, was more often cited than read. Alternatively,

Spencer had many readers whom he perversely provoked into admiring the very things he despised. Perhaps, finally, Spencer's educational ideas were ephemeral.

His beliefs were a product of his journalistic career during the 1850s and were prior to and independent of the philosophical system he produced between 1861 and 1893. In this system, he advanced a variety of evolutionary theories covering metaphysics, biology, and ethics. Some of these later ideas conflicted with the scientific opinions that had appeared in his *Education* because he never modified or updated these so that they would be adjusted to the more sophisticated and empirically grounded material in his system. These inconsistencies are particularly significant in Spencer's thoughts on psychology and sociology, areas that have a bearing on child development and socialization.

The difficulty in reconciling Spencer's educational theories with his general philosophy has caused particular confusion in two controversial subjects: Darwinism and progressivism. Spencer has been both praised and condemned for advocating one or the other of these two ideologies, but the reality was more complicated: Dealing with the first of these subjects is quite straightforward because it is a simple mistake to say that Spencer was a Darwinist in the sense of advocating competition or struggle for survival in education or social policy. That is, it is erroneous to claim that anyone before World War II used terms such as *Darwinism*, *social Darwinism*, or *Spencerianism* in a way that would justify "survival-of-the-fittest" doctrines in educational or social policies. Phrases such as *social Darwinism* belong to late 20th-century ideological debates, not to earlier scientific ones. (The publication in 1944/1992 of Richard Hofstadter's book *Social Darwinism in American Thought* did much to bring *social Darwinism* into popular parlance; see Leonard, 2009.) In any case, Spencer's portrayal of hypermasculine traits as recidivist, his advocacy of leisure, his well-known pacificism, his opposition to cruelty to animals, and his dismissal of the work ethos should have saved him from being recycled as an apologist for ruthless capitalist competition.

However, the second topic, progressivism, is more complex because Spencer was progressive in that he believed that education and science led to social progress combined with the view that inherited status should be abolished. This gave a forward-looking gloss to his beliefs. Since he thought that high-status groups neglected a scientific education

in favor of a classical one, which inculcated martial qualities, it meant that, for contemporaries, his education was perceived as radical. However, this aside, it seems willfully wrongheaded to enroll Spencer under the banner of a progressive education tradition beginning with Jean-Jacques Rousseau and continuing with Johann Pestalozzi, John Dewey, and Jean Piaget (see, e.g., the polemical work by Kieran Egan, 2002). Whether or not Spencer fits in this tradition, it is also doubtful whether the other writers should be grouped together as holding a common educational philosophy. Treating these figures as an ideological force seems willful and says more about the strength of the progressive tradition in American historiography than it does about the history of education. While it is easy to demonstrate the close connection between the first two figures in the tradition, Rousseau and Pestalozzi, the other putative links are mysterious—the practice obscures more than it reveals.

It is particularly awkward to refer to Rousseau and Spencer as being in the same education tradition when they perceived human development from starkly contrasting points of view. Spencer's *Education* (1864) posited that individual development "recapitulated" social evolution (p. 122) in a way that reversed Rousseau's famous dictum that both children and society began with freedom and ended in chains. Spencer, in common with many 19th-century social scientists, distrusted the notion of "primitive" freedom; instead, he hypothesized that individuals and societies *grew* into their respective cultures without preserving original virtues. While endorsing kindness to children and noninterference with indigenous peoples, Spencer's *Education* claimed that indigenes were backward because they held to prescientific and ineffective forms of knowledge. His support for noninterference with indigenes was not caused by their possessing freedom; it was because he detested the cruelty and violence that could be found in the administration of empire. Similarly, children should be treated kindly—not to preserve their freedom but because to do otherwise was cruel. Spencer's feelings on this subject were rooted in an ideal of hedonism that imagined that educational instruction and administration would be more effective if children and others in a weak position were not subjected to painful labor or discipline. It was not an echo of republican freedom that was heard by Spencer but a desire to preserve the values of spontaneity and leisure, which were values that humanity had only

acquired recently. That is, rather than harking back to a golden age after the fashion of Rousseau's freedom, Spencer's ideals—spontaneity and leisure—could only find fulfillment in advanced societies. There was an important difference here: Freedom had been usually construed as a civic value, while spontaneity and desires were private goods with no obvious public utility. Despite this, for Spencer, they constituted a powerful progressive bond between education, the process by which a private person learned to enjoy spontaneity and leisure, and an advanced political society, which protected these values from threats. In Spencer's terms, a society was progressive if it was sufficiently developed to undertake this task successfully.

While Spencer's *Education* was one formulation of his particular brand of progressive ideals, it was not the only source. Often, his contemporaries accessed Spencer from one of the volumes of his *Philosophical System*. Even Dewey, the mainstay of the so-called progressive tradition, took his Spencerism from *The Principles of Psychology* (1870, 1872), not from *Education*. This point is especially worth making because it has been recently denied that Dewey's educational beliefs were Spencerian. This argument depends on a detailed comparison between Dewey's theory and Spencer's *Education* while neglecting Dewey's tentative and complex debt to Spencer's psychology. Without reinforcing the idea of the progressive tradition, it is worth noting that the edition of the *Principles of Psychology* that attracted Dewey's attention to Spencer was the text in which Spencer distanced himself from the kind of racist comments that had appeared in his *Education*. Spencer's *Psychology* relied on ethnographic data as well as on neurophysiology, but in both disciplines, he tended to avoid statements that implied that a particular cultural or ethnic group possessed superior mental capacity. This liberal form of antiracism was closely associated with Spencer. Contemporaries who combined evolutionary theory with ethnography data—such as John Lubbock and Lewis Henry Morgan—displayed a racial ideology that associated indigenous peoples with primitive qualities. In his sociological and ethical writings, Spencer jettisoned the idea that the advance of civilization was accompanied by moral progress. On the contrary, he believed that "presocial" peoples often possessed more virtues than civilized ones. Since Spencer is sometimes accused of promoting a racial ideology, it should be stressed that the cultural emphasis of his evolutionary writing blunted biological racism

(Jeynes, 2011, pp. 538, 551; Leyva, 2009, p. 365). Because Spencer was uninterested in questions of genetic origins and species variation, there was little in his biological writings that contemporaries could use to offset his belief that cultural change was more important than genetics.

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See also Evolution and Educational Psychology; Faculty Psychology and Mental Discipline; Pestalozzi, Johann H.; Progressive Education and Its Critics; Social Darwinism

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STAGE THEORIES OF DEVELOPMENT

See Moral Development: Lawrence Kohlberg and Carol Gilligan; Piaget, Jean

STEREOTYPE EFFECTS AND ATTRIBUTIONS: INSIDE AND OUT

Stereotypes were first described by Walter Lippmann (1922) as “mental pictures of reality.” Expanding on this notion, Gordon Allport (1954) considered how stereotypes (which he defined as “overcategorizations”) are formed and applied. Allport was the first to say that stereotypes can manifest from a “kernel of truth” (p. 19), meaning that people take one (kernel) experience with a given group and attribute that experience to all group members; thus, stereotypes are not necessarily reality based (as Lippmann implied). Allport wrote that because it takes too long to think deeply about everything we encounter, people must rely on snippets of information (i.e., stereotypes) to make decisions. Stereotypes are beliefs, knowledge, and expectations about a group that influence our thoughts, feelings, and behavior. Stereotypes are formed from our experiences and what we are told or learn from outside sources (e.g., media, parents, teachers, peers, etc.). Stereotypes play an important role both in how we see other people and how we ourselves feel and behave. This entry examines common misconceptions about stereotypes, how stereotypes influence perceptions of others as well as perceptions of the self, and the future of stereotype research.

How Are Stereotypes Different From Prejudice and Discrimination?

The term *stereotype*, and its cognates, is often misused and is incorrectly believed to be interchangeable with *prejudice* and *discrimination*. For instance, even though a person can easily list five stereotypes about women, this does not mean the person is prejudiced or will act discriminatorily. Stereotypes

are *thoughts* (i.e., cognitions) about a group; prejudice refers to *feelings* (both positive and negative) and does not involve any action toward that group. A biased *action* is called discrimination. This entry focuses on stereotypes.

Looking Out: How Stereotypes Influence Our Perception of Other People

Stereotypes shape how people judge and evaluate others. People often attempt to explain an individual's actions or evaluate a person's skill level by appealing to stereotypes. A classic test of this in stereotype research has people read about a student who goes to the store, who argues with his roommate, and who studies for a test. Imagine that this student's name is either Donald or Jamal. When people read about Jamal as opposed to Donald, they rate the student's behavior as more aggressive because they assume Jamal is African American and African Americans are stereotyped as violent. Even positive information is filtered through stereotypes. For example, consider a student athlete who wins a big game; if people think the athlete is a boy, they praise his innate ability; if they think the athlete is a girl, they praise her effort. Boys are stereotyped as naturally gifted at sports, while if a girl succeeds in sports it is due to practice. Thus, stereotypes change the meaning that people attribute to the same behavior (athletic prowess or arguing with a roommate).

Thomas Pettigrew (1979) proposed the concept of *ultimate attribution error* as one way to think about stereotyping. People erroneously interpret the negative behavior of a group member as characteristic of the entire group, reinforcing negative group stereotypes. However, when people are faced with positive information that defies the group stereotype, they assume it is a situation-specific anomaly, making it nearly impossible for them to change their group stereotypes.

All people (men and women, Blacks and Whites, young and old) unintentionally use stereotypes to explain the behavior of others. This unintentional stereotyping (or implicit stereotyping) is very difficult to overcome. In a classic demonstration of the power of implicit stereotypes, Patricia Devine (1989) showed that simply thinking about a particular group brings to mind the stereotypes associated with that group, even among people who consider themselves tolerant, fair-minded, and "motivated to respond without prejudice." For

example, even professors in the sciences at prestigious universities use gender stereotypes to evaluate the competence of a (male vs. female) graduate student.

In some cases, unintentional implicit stereotyping can manifest itself in a way that renders the stereotype true. The *self-fulfilling prophecy*, identified by Robert Rosenthal and Lenore Jacobson (1968), occurs when an individual (the perceiver) holds stereotypes about another person (the target) that inadvertently shape the target's behavior. For instance, within a classroom setting, a teacher (the perceiver) might believe that male students (the targets) will not be as gifted in reading as female students. Because of this stereotype, the teacher might spend less time answering questions posed by—and respond less favorably toward—male students in reading class. As a result, male students will begin to perform more poorly in the classroom. While the teacher will interpret the male students' behavior as confirmation of his or her belief that male students are not as gifted as female students in reading, in reality, male students are performing poorly because of the teacher's biased treatment that was based on the teacher's gender stereotypes about reading performance. In fact, stereotypes that parents, peers, and teachers have about students have an effect on students' behavior far beyond the classroom, affecting domains such as choice of academic major and even career.

Looking In: How Stereotypes Influence Our Own Self-Perceptions

People assimilate to an activated stereotype even if they are not members of the stereotyped group. For instance, many people hold the stereotype that professors are smart. Thus, when the stereotype of a professor is brought to mind, people will assimilate to this stereotype by acting more intelligently. More specifically, when students are exposed to words related to being a professor (activating the stereotype), students actually perform better on an intelligence test. This effect occurs because there is an association between behavior and mental representations (including stereotypes) in the mind. In the same way that sleepiness leads to sleeping, when stereotypes are brought to mind (even without awareness), people behave in a manner consistent with the stereotype.

Stereotype assimilation can be particularly problematic for people who are members of the

stereotyped group. *Stereotype threat* occurs when someone is worried about confirming a negative stereotype about his or her group. Claude Steele and Josh Aronson (1995) demonstrated that even among bright, high-achieving Black students at Stanford University, simply checking a box to indicate their race on a demographic sheet was enough to trigger stereotype threat, resulting in lower scores on an intelligence test. People often assume that their test performance or interest in a given achievement field is the result of skill level and personal choices. Yet stereotype threat research tells a different story. A woman who is in a room full of men in a physics classroom may be highly skilled, but she may worry that because she is a woman, she will be judged by stereotypes about women in science. Her worry will deplete her mental resources and hurt her performance. The stereotype will cause her to focus on not failing (instead of on succeeding), will distract her from the tasks at hand, and will result in greater feelings of uncertainty about belonging. Over time, the mere presence of the stereotype may undermine her motivation, contributing to what Jessi Smith, Sansone, and White (2007) termed the *stereotype task engagement process*. Unmotivated and exhausted, this woman is likely to drop out of physics, reinforcing the stereotype that women do not belong in science and perpetuating the stereotype that physics is difficult, nerdy, isolated, and unfriendly toward women.

Such stereotypes about majors, fields of study, and careers can partially determine what careers people choose. Although most people think they choose a career because it suits them, people use stereotypes to determine career suitability. In fact, students often choose careers that they believe are consistent with their goals and values. Amanda Diekmann, Brown, Johnston, and Clark (2010) developed *goal congruity theory*, which predicts that when students believe (based on stereotypes) that a career field will not meet their goals, they are less likely to choose that field. For instance, many students in the United States believe that the fields of science, technology, engineering, and mathematics involve spending the majority of one's time working alone. This stereotype of the "lone scientist" deters students who value collaboration from deciding to pursue a career in these important fields. In reality, however, scientists often collaborate in teams, mentor students, attend conferences, and are very engaged with other people, and when this information is pointed out (the stereotype

is debunked), students are more likely to show interest in the field.

Looking Into the Future

Some people are obviously members of a stereotyped group—characteristics such as skin color, gender, and obesity are visible to the eye. The vast majority of research on stereotypes focuses on obvious group membership. What if someone has a concealable characteristic, such as sexual orientation, mental illness, or religion, that is difficult to determine visually? How do these types of stereotypes influence how people view others and how people view themselves? Additionally, what happens when someone is a member of more than one group? The next stage in stereotyping research is parsing through these types of questions.

Summary

Stereotypes are thoughts about groups that shape our beliefs and behavior. You do not have to agree with a stereotype, and you do not even have to realize you hold the stereotype, for the stereotype to influence and affect your perceptions of others (looking out) and your perceptions of yourself (looking in).

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See also Achievement Gap; Achievement Motivation; Motivation; Racism and Multicultural Antiracist Education

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SYMBOLIC INTERACTIONISM

See Mead, George Herbert



TAOISM

See Daoism

TAXONOMY OF EDUCATIONAL OBJECTIVES

The *Taxonomy of Educational Objectives, Handbook I: Cognitive Domain*, a small volume developed to assist college and university examiners, has been transformed over the past half-century into a basic reference for educators worldwide. In addition to testing, evaluation, and assessment specialists, it has been used by curriculum designers, researchers, administrators, and classroom teachers throughout the world at all levels of education. This broad-based use of the taxonomy is consistent with its stated purpose: to facilitate communication among everyone involved in education by providing a common framework with a common language (see, e.g., Anderson & Sosniak, 1994). This entry discusses the origins and objectives of the taxonomy, its structure, criticisms of the taxonomy, and alternative frameworks that are based on it.

The Origins of the Taxonomy

In 1931, President Robert Maynard Hutchins established general education requirements for undergraduate students attending the University of Chicago. They were required to complete four-year-long

introductory courses in each of four divisions and pass a comprehensive examination in each. Student scores on these examinations were the sole gauge of academic success; mandatory attendance and letter grades were eliminated. To ensure that the examinations were sufficiently valid, reliable, and objective for their intended purpose, Hutchins established a board of examinations, headed by a university examiner and a group of college examiners, each of whom was responsible for working with the faculty in a specific college within the university. In the late 1940s, Ralph W. Tyler was the university examiner, and his student Benjamin S. Bloom was a college examiner for the Division of Social Sciences (Bloom, 1954).

At the meeting of the American Psychological Association held in 1948, Bloom suggested to his colleagues that the development of a common framework of goals and objectives might be useful in facilitating the exchange of ideas and materials that would enable them to do their work more effectively and efficiently. The proposal was well received and work on the development of the “examiners’ taxonomy” began a year later. After five years of work by more than 30 educators, psychologists, and psychometricians, a preliminary edition of the *Handbook* was produced. Two years later, the final version, which incorporated suggestions from the reviewers of the preliminary edition, was published (Bloom, Englehart, Furst, Hill, & Krathwohl, 1956). As the title implies, the original plan called for two additional handbooks, one in the affective domain and the other in the psychomotor domain. Although both were eventually completed (Harrow, 1972; Krathwohl, Bloom, & Masia, 1964), when

educators speak of “the taxonomy” or “Bloom’s Taxonomy,” it is the cognitive taxonomy that is being referenced.

The Nature of Objectives and the Structure of the Taxonomy

To understand the taxonomy, it is important to understand the structure and format of objectives. In education, objectives are “explicit formulations of the ways in which students are expected to be changed by the educative process” (Bloom et al., 1956, p. 26). Tyler (1949) suggested that the “most useful form for stating objectives is to express them in terms which identify both the kind of behavior to be developed in the student and the content . . . in which this behavior is to operate” (p. 30). Tyler used the term *behavior* to refer to a broad spectrum of human reactions that included thinking and feeling as well as overt actions. Tyler’s formulation led to a standard grammatical structure for objectives, namely, subject–verb–object. The subject is the student or, in Tyler’s terms, the learner. The verb is the behavior, and the object specifies the content. Consider, for example, the following objective: “The learner should be able to use laws of electricity and magnetism (e.g., Lenz’s law and Ohm’s law) to solve problems.” “The learner” is the subject, “use” is the verb, and “laws of electricity and magnetism” is the object.

Focused exclusively on the verbs, the taxonomy consists of *six behavioral categories* that are arranged along a *continuum of complexity* and form a *cumulative hierarchy*. The least complex category is labeled “knowledge,” which was defined as “those behaviors . . . which emphasize the remembering, either by recognition or recall, of ideas, material, or phenomena” (Bloom, 1954, p. 62). The most complex category is labeled “evaluation,” the “making of judgments about the value, for some purpose, of ideas, works, solutions, methods, material, etc.” The four intermediate categories are labeled “comprehension,” “application,” “analysis,” and “synthesis.” Each increasingly complex behavioral category was said to build on and incorporate the behaviors in the less complex categories. The term *cumulative hierarchy* was used to describe this interrelationship between and among categories.

Criticisms of the Taxonomy

Criticisms of the taxonomy have been many and varied. Some critics have argued that with its emphasis on student behaviors the taxonomy was based on the

principles of behavioral psychology, the predominant psychological theory at the time (see, e.g., Dunne, 1988). These critics fail to understand Tyler’s use of the term *behavior* as described earlier and are also guilty of confusing student behavior as an intended outcome with the principles of behaviorism that apply to the ways in which student behavior is learned.

Other critics have suggested that the taxonomy results in a fragmentation of the curriculum (see, e.g., Broudy, 1970). That is, the taxonomy is likely to yield a set of overly specific objectives that are not likely to coalesce into the broader, integrated understandings that are the real goals of the educational system. These critics do not recognize the different “levels” of objectives that can be written, ranging from large general course or program objectives to quite specific lesson objectives. The authors of the taxonomy rejected overly narrow objectives, seeking instead objectives that had a “level of generality where the loss by fragmentation would not be too great” (Bloom et al., 1956, p. 6).

Still other critics argued that the concept of a “cumulative hierarchy” would result in a lockstep approach to both curriculum and instruction (Furst, 1981; Kelley, 1989). That is, teachers would emphasize memorization of the entire curriculum before moving to comprehension, application, and the other higher-order categories. Whether this practice did or did not occur is a matter of debate. What is not debatable is that a large percentage of objectives were in fact written at the lowest level of the taxonomy, “knowledge.”

The Taxonomy: Present and Future

In the years since the *Handbook*’s publication, at least 19 alternative frameworks for classifying objectives have been developed (see Anderson & Krathwohl, 2001, for a review), most of which have been derived, either directly or indirectly, from the original taxonomy. In 1996, a team of educators and psychologists, under the direction of David Krathwohl, one of the authors of the original taxonomy, began work on a revision. Of the many modifications made in the original, three are clearly the most important. First, because the original taxonomy was intended to classify student behaviors (i.e., the verbs in the standard format for stating objectives), the revised taxonomy includes the verb forms of the category labels (e.g., the noun “analysis” became “analyze”). Second, based on both the grammatical structure of objectives and the review of alternative frameworks, the revised

taxonomy is two dimensional. To produce the second dimension, the term *knowledge* was replaced by *remember* (which is consistent with the original definition of “knowledge” mentioned earlier). This replacement freed “knowledge” to become a separate dimension, with four types of knowledge specified: factual, conceptual, procedural, and metacognitive. To avoid the confusion of behavior with behaviorism, the first dimension was labeled “cognitive processes.” The two dimensions of the revised taxonomy, then, are “knowledge” and “cognitive processes.” Third, based partly on available empirical evidence and in part on the concerns expressed by the critics, the “cumulative hierarchy” requirement was abandoned. Instead, the six cognitive processes are seen as “tools in a toolbox,” where students can learn to analyze *before or after* they learn to apply.

One final comment is in order concerning the use of taxonomies in education. Taxonomies cannot be applied blindly. They are intended to be used, and are used best, to stimulate thinking about curriculum, instruction, teaching, assessment, evaluation, and the complex interrelationships between and among them. More than 60 years ago, Bloom suggested that his proposed framework could help bring order out of chaos in the field of education. As modern-day education becomes increasingly chaotic, a reconsideration of the importance and use of taxonomies seems warranted.

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See also Accountability and Standards-Based Reform; Aims, Concept of; Behavioral Objectives and Operational Definitions; Behaviorism; Validity, Types of

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TEACHING, CONCEPT AND MODELS OF

While teaching and learning are central to the enterprise of education, it was not until the 1960s and 1970s that there was much interest in investigating the concept of teaching itself. This belated attention was sparked in part by John Dewey's claim that the relationship between teaching and learning is the same as that between selling and buying—that is, there is no teaching without learning. The purpose of this entry is to explore this claim and other related philosophical concerns regarding the concept of teaching and then to describe various teaching models.

The Concept of Teaching

In everyday speech, the word *teaching* has three uses. As a verb, it refers to actions intended to bring about learning, and as a noun, it can refer either to the occupation of one who educates or instructs or to a body of ideas or beliefs (as in the teachings of a particular religion or culture). We will focus here on the first, the activity sense, wherein teaching is understood to be a set of actions designed to lead others (a) to know something that they did not know before, (b) to know how to do something they did not know how to do before, or (c) to acquire an attitude or belief that they did not have before. These actions include direct modes of instruction such as lecturing, modeling, demonstrating, explaining, showing, clarifying, and describing, as well as

more indirect modes such as teaching by example, facilitating discussions, involving students in group work, mentoring, and participating in discovery-based activities. The main point is that for an action to be considered teaching, it must (minimally) be an intentional activity aimed at bringing about learning.

Even though most of us might not describe teaching the way a philosopher would, we would probably say that we can recognize teaching when we see it. We may disagree about what constitutes good teaching, but if we are walking down a school hallway and overhear someone explaining and demonstrating on the board how to divide fractions, we will likely assume that person is teaching. Or if, on a visit to the zoo, we see a parent bent down to his child's eye level, pointing to a chimpanzee using a stick to dig ants out of a nest, and talking to the child, we are also likely to assume that the parent is teaching the child something about chimpanzees. But are these in fact instances of teaching? What if, at the end of the day, the students do not know how to divide fractions or if the child at the zoo was so distracted by an airplane overhead that she did not even hear what her parent was saying? Can we still say that the teacher and the parent were teaching? For some philosophers, the answer would be yes, and for others, no.

Based on the work of the ordinary-language philosopher Gilbert Ryle, the question of whether teaching necessarily entails learning is often framed as the difference between teaching as a *task* word and teaching as an *achievement* word. In the task sense, the main criterion for considering an action or set of actions to be teaching is that it is *intended* to bring about learning whether or not such learning ensues. Other examples of task words include run, search, treat, and listen. It is clear that one can engage in these tasks without necessarily succeeding. One can run without winning the race, search without finding the lost object, treat the patient without managing to cure the disease, or listen to the speaker without being able to hear what he is saying. So even though task words are typically coupled with achievement words, achievement or success is not a defining feature of the task itself.

Coming back to teaching, then, if teaching is a task word, it is entirely legitimate to say that teaching has taken place whether or not it has resulted in learning. This is the view advanced by B. O. Smith and Israel Scheffler, whose "standard thesis" defined teaching according to three criteria: intentionality, reasonableness, and manner, and *not* by whether or not the student learned. In a similar vein, C. J. B. Macmillan

and James Garrison proposed an "erotetic" concept of teaching wherein the primary job of teachers is to answer students' questions—not just the questions students *actually* pose, but the questions they *ought* to pose in order to help guide them out of their current intellectual predicaments toward more complex levels of intellectual engagement. On Macmillan and Garrison's view, even excellent teaching can occasionally miss the mark and students will not have learned what the teacher intended them to learn, but at the end of the day, one could still say that teaching had occurred. For Dewey, however, teaching is fundamentally an achievement word. Recall his analogy that the relationship between teaching and learning is the same as that between selling and buying. Just as it would make no sense for a storeowner to say he sold a lot of merchandise even though no one bought anything, for Dewey, it makes no sense to say that one has taught *X* if the students did not learn it. In other words, if teaching is understood as an achievement word, no matter how much expertise, imagination, preparation, and care went into planning and delivering a lesson, if the students did not learn, the best one can say is that one *tried* to teach *X* but failed.

Now it might seem that trying to figure out whether teaching is a task word or an achievement word is mere philosophical trifling, but as Scheffler and others insist, any definition of what teaching essentially *is* carries normative as well as descriptive weight. In Richard Peters's view, for instance, education involves initiation into worthwhile activities, and teaching plays a central role in that process by helping students acquire the knowledge, skills, and attitudes necessary for participation in such activities. In other words, teaching is about leading students to a more commendable state of mind than they had before. So as soon as we start to think about teaching, we are already caught up in questions of value. What makes certain activities more worthwhile than others? And what knowledge and experiences will best prepare students to participate in those activities?

If teaching is central to education, and one of the defining features of being educated is the ability to think critically about what one holds to be true, we soon discover that not just any actions intended to lead someone to know (or to know how to do) something they did not know before will suffice. Indoctrinating, coercing, deceiving, bribing, threatening, or lying to students might be quite efficient ways to get students to believe something to be true, but these actions are not the same as teaching. Teaching cannot be about imposition or deceit;

rather it requires the teacher to make himself open to his students' needs, understanding, criticism, and demands for reasons, so that they not only come to believe *that* a particular idea is true, but they know *why* they ought to do so.

Thus far, the discussion has focused primarily on teaching as actions aimed at the cultivation of rational understanding, and this is fairly indicative of work in the field up to the 1980s. Around that time, Jane Roland Martin, Nel Noddings, Susan Laird, and others drew attention to the idea that education ought not to be seen as a purely rational pursuit—that intellectual predicaments are inevitably tied up in human predicaments, in the realities of human lives. They argued that emotional development and participation in the private sphere ought to be considered as fundamental to education as intellectual development and participation in the public sphere. So, following from this, if teaching is meant to contribute to education, it cannot be about ideas abstracted from the particulars of human experience or directed toward some generalized notion of “the student.” A key difference from earlier perspectives is that while Scheffler, Peters, and other philosophers acknowledged the inescapably value-laden nature of teaching, they sought recourse in reason and universal experience with little if any attention to the moral emotions and particularity.

Beginning in the 1990s, philosophical conversations about teaching expanded further to include political as well as intellectual and moral concerns, especially the ways in which students' and teachers' race, class, gender, and culture influence teaching. These conversations led philosophers of education to revisit prevailing conceptions of teaching since one of the difficulties in trying to define *good* teaching in particular is that such conceptions often reflect one's own cultural experiences and expectations. For example, is good teaching characterized by active encouragement of student dissent or by the faithful transmission of cultural traditions and ideas? Does good teaching emphasize individual achievement and competition or cooperation and collaboration between students? What are the markers of a good teacher–student relationship?

Since 2000, the work of the French post-Marxist philosopher Jacques Rancière has received considerable attention from educational scholars, especially—although not exclusively—for his 1981 *The Ignorant Schoolmaster: Five Lessons in Intellectual Emancipation*. In that book, Rancière contests the idea of unequal intelligence between

teachers and students, arguing that the assumption of unequal intelligence becomes a self-fulfilling prophecy in the dominant mode of teaching (explanation), whereby teachers transmit their knowledge to students in an order and pace determined by the teacher. In contrast, Rancière cites the experience of the 19th-century teacher Joseph Jacotot and his concept of “universal teaching.” Jacotot, who spoke only French, was charged with teaching French to pupils who spoke only Flemish, so he gave them both the French version and a Dutch translation of Fénelon's *Télémaque* and told them to start by memorizing some sentences in French and comparing them with the Dutch and then to repeat and gradually build on what they had learned the previous day. Jacotot discovered that over time, with no other help from him, his pupils had learned and could apply the rules of French spelling and grammar. Thus, Rancière argues, if teaching aims to be emancipatory, it must proceed from the assumption that students are as intelligent as the teacher and capable of figuring things out on their own. The role of the teacher, therefore, becomes primarily one of directing and redirecting students' attention and verifying students' work, obliging them to use their intelligence. “The ignorant person will learn by himself what the master does not know if the master believes he can and obliges him to realize his capacity” (Rancière, 1981/1991, p. 15).

This brief sketch is obviously an inadequate representation of the considerable contributions philosophers of education have made to our understanding of teaching, and many more questions remain: Can one legitimately say, “I teach children not subjects”? Is teaching necessarily an interpersonal activity or can computers teach? Does expertise in a subject area such as history or physics qualify one to teach or does teaching also demand pedagogical knowledge? But let us now turn our attention to models of teaching.

Models of Teaching

There are several ways to categorize approaches to teaching and the particular educational aims they serve. Here, we will focus on three frameworks that have been influential in North American education: (1) Bruce Joyce and Marsha Weil's four models of teaching; (2) Gary Fenstermacher and Jonas Soltis's executive, facilitator, and liberationist models; and (3) John Miller and Wayne Seller's transmission, transaction, and transformation orientations.

Joyce and Weil organize teaching into four connected groups of teaching models. The first group,

social interaction models of teaching, focuses on improving students' ability to relate to others as a foundation for improving democratic processes and society in general. Notable examples include Dewey's education for democratic participation and William H. Kilpatrick's project method. The second group, *information processing* models, focuses on the ways individual students take in information from their environment, organize it, generate concepts and solutions to problems, and use verbal and nonverbal symbols. Jerome Bruner's inductive reasoning approach and Jean Piaget's stage theory of intellectual and moral development are two of the best known in this group. The third group, *personal* models of teaching, puts a heavier emphasis on individual emotional development than on the purely cognitive processes. Proponents of these models believe that healthy emotional development is a precondition for both productive social relations and the individual's ability to process information. Two key examples are Carl Rogers's humanistic psychology and William Glasser's choice theory, which emphasizes noncoercive teacher-student relationships and student-centered teaching as the foundation for academic success. Finally, *behavior modification* models of teaching, based on B. F. Skinner's research, focus on changing the student's external, observable behavior rather than attending so much to the underlying cognitive processes. This approach was widely used during the last half of the 20th century in teaching children with cognitive or behavioral difficulties and to regulate classroom behavior.

Fenstermacher and Soltis later proposed a three-pronged model of teaching: (1) the executive, (2) the facilitator (previously called the therapist), and (3) the liberationist. The *executive* approach sees the teacher as a manager of the classroom. Teaching, on this view, is construed as the responsibility to achieve particular learning outcomes using the best skills and techniques available. Educational research thus plays a key role in providing the teacher with the tools she will need to manage the complexities of classroom practice, which in turn ought to result in strong student achievement. The teacher as *facilitator* approach, on the other hand, puts a high value on the experiences students have prior to coming into the classroom. Teaching as facilitating (drawing on its earlier label of teacher as therapist) emphasizes the psychological aspects of teaching. Similar to Joyce and Weil's personal models of teaching, the primary function of the teacher as facilitator is to help his students reach a high level of self-actualization and

self-understanding, and this model draws largely on the scholarship in humanistic psychology, learning theory, and existential philosophy. The third approach is the *liberationist*. In its traditional version, the liberationist approach to teaching is rooted in a classical liberal education that positions the teacher as one who frees and opens the mind of the learner, initiating her into human ways of knowing and assisting her to become a well-rounded, knowledgeable, and moral human being. More recently, however, the liberationist approach has expanded to include the idea of teacher as *emancipator*—as one who frees students' minds from political and social oppression based on race, class, gender, or cultural background.

About the same time as Fenstermacher and Soltis's model appeared, Miller and Seller put forward a different three-pronged model of orientations to teaching: (1) transmission, (2) transaction, and (3) transformation. Although their work claims to be about perspectives on curriculum, much of the discussion focuses on teaching. In the *transmission* model, teaching focuses on content mastery through traditional teaching approaches such as lectures or learning from a textbook. As the name implies, teaching on this view goes one way, from the teacher (or text) to the student, and good teaching is that which results in the successful passing on of knowledge from one generation to the next. *Transactional* teaching, on the other hand, is based on a belief that learning happens as students interact with their social and natural environment. The best example of this approach is Dewey's hands-on, experiential education. The third approach, teaching as *transformation*, has clear parallels to Fenstermacher and Soltis's liberationist/emancipatory approach in which the emphasis is on personal and social change.

Conclusion

What these various philosophical debates and ways of describing and categorizing teaching all reveal is that teaching is a difficult concept to pin down with any precision. It has unclear boundaries, and there are several activities, such as training and conditioning, that have some features in common with teaching but on closer examination are shown not to be the same as teaching. For those who work on the front lines in K-12 classrooms, trying to reach a precise definition of teaching might not seem a particularly pressing concern, but figuring out just what it is we are doing—or ought to be doing—when we say

we are teaching is in fact an essential starting point for improving practice.

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See also Communities of Learners; Dewey, John; Ethics in Teaching; Indoctrination; Learning, Theories of; Martin, Jane Roland; Pedagogical Content Knowledge; Lee Shulman; Progressive Education and Its Critics; Scheffler, Israel

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TEACHING MACHINES: FROM THORNDIKE, PRESSEY, AND SKINNER TO CAI

As the psychologist Ludy Benjamin (1988) explains in his retrospective on the history of teaching

machines, a teaching machine is a wholly or partially automated device that does three things: “(a) presents a unit of information, (b) provides some means for the learner to respond to the information, and (c) [the device] provides for feedback about the correctness of the information” (p. 704). As the present entry details, the mechanical version of teaching machines was pioneered in the early 20th century and reached their heyday in the 1960s, a point at which they were closely associated with the educational theory of B. F. Skinner. Following a swift decline, the machine technology migrated to early computer systems, becoming part of the computer-aided instruction (CAI) movement of the 1970s. Although both mechanical teaching machines and CAI have long since faded as educational movements, traces of the teaching machine can be found in much of today’s educational software.

From Thorndike to Pressey

A reasonable place to begin a brief history of teaching machines is with the psychology of Edward Thorndike (1874–1949), whose experiments inspired some of the first devices of this kind. In *Animal Intelligence* (1911), one of his earliest and most influential works, Thorndike attempted to understand how animals learned. At the time, work on animal behavior was primitive; far-fetched but elaborate theories about animal intelligence were supported by anecdotal reports of clever cats and dogs. Thorndike cut the foundations out from under these theories with a series of experiments in which he placed dogs, cats, and chicks in a series of boxes from which they would try to escape. While the animals were often successful in escaping from the boxes and got progressively more efficient over time within a given box, Thorndike demonstrated that the animals displayed no capacity for either reasoning or imitation. Instead, Thorndike postulated that the animals simply formed an association between a particular problematic situation (e.g., being stuck in a box) and an impulse (e.g., accidentally, in the process of trying to escape, tripping a lever), which then resulted in a pleasurable outcome (e.g., escape). These associations, which, though formed accidentally, became stronger over time and were the basis of how animals learned.

Building on these early experiments with animals, Thorndike theorized that the same associationist logic held true with human learners. From the standpoint of education, then, the problem was one of building an appropriate situation that would elicit

the response from the learner that was educationally useful. In addition, it was also appropriate to reward the correct response, as this reward would make it more likely for the response to be repeated in the future. Thus, by means of a combination of deliberately constructed educational situations and appropriate rewards, the desired skills, knowledge, and habits would gradually be built up.

Given that Thorndike's animal boxes taught animals to make and retain associations, it is not surprising that they inspired one of the first and simplest antecedents to human teaching machines, which took the form of a set of lettered blocks that interlocked within a wooden puzzle box. Created by Hubert Aikins in 1911, the system would "reward" the child with a completed box only if he fit the letters into the box in the correct sequence. This device, however, did not actually present information to the learner, which means that it does not fully fit Benjamin's threefold criteria for a teaching machine—(1) presenting information, (2) providing a means for response, and (3) rewarding a correct response.

The first machine that actually fit these criteria was designed by Sidney Pressey (1888–1979), an educational psychologist, in 1928. Pressey called it a "Machine for Intelligence Tests," and this was, in fact, its primary use. The testing function presented a frame of information to the user, who would then press a button corresponding to one of several possible responses. This button press would be registered through a card punch, and the machine would then advance to the next frame. The "teaching" mode was an alternative mode in which the only substantive difference from "testing" mode was that the user would not be able to advance to the next frame of information until he or she had responded correctly to the question. Pressey also designed a candy-dispensing attachment for his machine, in which a piece of candy would pop into the front of the machine after the user had reached a threshold of correct responses.

Unfortunately for Pressey, his machine was substantially ahead of its time. His devices sold very poorly, and his hope for an "industrial revolution in education" through teaching machines would lie dormant until it was revived about 30 years later by B. F. Skinner.

Skinner and the Heyday of the Teaching Machine

Like Thorndike, B. F. Skinner (1904–1990) was a psychologist; he was destined to become the most famous behaviorist of his day. In the initial stages

of his career, he took a particular interest in animal behavior, but he differed substantially from Thorndike in his approach to psychological theory. Skinner felt that theory had proven to be a substantial distraction from paying attention to behavioral data and establishing meaningful, reliable, and quantifiable relationships between behavioral variables. His solution to this problem was a novel one: He proposed that psychology should entirely abandon the futile activity of theorizing mental events and instead focus solely on behavior that could be directly observed.

Naturally, this unorthodox postulate had substantial implications for educational thought. Skinner argued that the critical variable in learning was the entity's rate of response to a particular stimulus—when the correct response was frequently emitted by the organism, one could say that it had "learned" the behavior (although, of course, Skinner eschewed the term *learning* as being excessively mentalistic). Skinner's tight focus on rates of response drew him to experiment with different reward schemes for correct responses ("schedules of reinforcement"), which led him to a number of worthwhile discoveries, including the fact that an intermittent schedule of reinforcement will yield maximal results in terms of the maintenance of a behavior.

Skinner's commitment to the observation, shaping, and control of behavior had impressive results in animal training, and he developed sophisticated machines that were designed to establish effective techniques for controlling animal behavior. Rats were trained to depress levers to obtain food, and pigeons were trained to peck a particular button when a light of a given color flashed (and they even were able to "learn" dancelike movements). Through these techniques, Skinner achieved some spectacularly complex animal "learnings"—in one secret U.S. Army project involving large rockets with warheads, he managed to train a battery of pigeons to peck the same target building on a variety of different aerial photos of a city (a guidance system the military was reluctant to deploy).

For Skinner, it was but a short jump from using machines to train animals, to devising teaching machines for humans. His animal apparatuses were designed to reinforce animals when they emitted desired behaviors and to thereby shape up the final set of desired responses, and the teaching machines were simply viewed by Skinner as a more complex and elaborate version of the same thing. "Learning" math was simply a matter of developing a particular

repertoire of “mathematical” behavioral responses. A particular mathematical stimulus ($2 + 2$) would be presented, and the child would be rewarded for emitting the correct response of 4.

Mathematical behavior was, however, a more complex set of responses than was required from animals and therefore necessitated a more complex program to shape the correct set of responses. Yet the solution was the same as in the case of the animals: The desired suite of behavior needed to be broken down into a set of small behavioral components, and the components needed to be presented to the child one by one. Thus, Skinner suggested that instructional programs be designed to incrementally develop the final desired behavior. The program’s increments would be in the form of simple fill-in-the-blank questions ($2 + 2 = \underline{\quad}$), and the program would be delivered through a machine that would reward correct responses. Skinner (1959) described one of his prototype machines as follows:

The device consists of a box about the size of a small record player. On the top surface is a glazed window through which a question or problem printed on a paper tape may be seen. The child answers the question by moving one or more sliders upon which the digits 0 through 9 are printed . . . When the answer has been set, the child turns a knob . . . If the answer is right, the knob turns freely and can be made to ring a bell or provide some other conditioned reinforcement. If the answer is wrong, the knob will not turn. (p. 154)

The idea here was that the child would use the machine to learn, in stepwise fashion, to emit the appropriate mathematical behavior when presented with the proper stimuli. Everyone would gain—the teacher would be freed from drudgery of marking student work, and become instead the “guide on the side” that progressive education had envisioned, and all learners would acquire the repertoire of behavior necessary to become free and capable citizens.

Skinner’s ideas proved to be popular, and during the early 1960s, both programmed instruction-based teaching machines and book-based programmed instruction enjoyed a surge of popularity. Unfortunately for Skinner, both the machines and the programs themselves suffered from significant problems, and the initial optimism surrounding these programs and their accompanying machines soon waned. Perhaps the most significant issue was

that unlike pigeons, human students had a low tolerance for boredom, and programmed instruction proved to be boring to students of all ability levels. At first, students enjoyed the novelty of the machines, but once the novelty wore off, they were bored by the programs’ rigid structure and asocial setup.

Teachers also found the machines to be problematic. The instructional programs did not serve effectively as reference materials due to the way in which the information was broken up and also due to the fact that the programs could not be rewound once they were loaded into a machine. The quality of the programs was also a major issue—it is a difficult (and probably very boring) task to write a Skinnerian educational program, and many teachers found that the programs they were asked to use were badly designed.

A final difficulty was that as the machines gained popularity, there was an influx of hucksterish teaching machines from commercial encyclopedia companies like Grolier, which capitalized on the nascent popularity of teaching machines by exaggerating the original promises of the movement, promising learning “in half the time with half the effort.” These promises of instant, easy learning were comically false, as research showed that in actual classroom situations, programmed instruction outperformed conventional instruction only episodically and that the marginal gains that were realized were accompanied by intense student antipathy toward the systems. As a result of this lack of empirical support and a substantial lack of enthusiasm on the part of teachers and students, teaching machines and programmed instructional materials began to pile up in the warehouses of educational publishers. The teaching machine, at least in the form that Skinner envisioned it, was in steep decline by the end of the 1960s.

The Rise of CAI

Yet despite the fact that analog teaching machines failed to catch on, the basic idea behind them lived on. Having abandoned their initial technologies, the backers of teaching machines transferred their techniques to a new device: the computer. Starting from the mid-1960s, the movement to automate instruction gradually ceased to be called “teaching machines” and became known instead as “computer-aided instruction,” or CAI, a term that lasted until the mid-1980s. As CAI developed, however, the theoretical currents behind the automated

instruction movement became substantially more complex. In contrast to teaching machines, which were entirely behaviorist in their theoretical underpinnings, CAI featured two principal theoretical strands: behaviorist and cognitivist.

In the 1960s, the early days of CAI, the behaviorist strand was by far the strongest. Many of the early CAI efforts were simply transpositions of the teaching machine to a primitive digital environment. From the conceptual standpoint, the transposition was not particularly difficult to make—the method of programmed instruction was already quite clear, and it was simply a matter of arranging the frames to be presented to children on the computer. Given that the personal computer did not yet exist when CAI began, the early CAI systems were phenomenally expensive—they consisted of central computers that would deliver frames to terminals used by students, who could then respond appropriately. These systems fared well in some studies, however; a series of behaviorist programs delivered by Patrick Suppes' Computer Curriculum Corporation delivered substantial gains in both math and reading. Despite this effectiveness, these systems also suffered from the same principal defect of the original teaching machine: Students found them unpleasant to use.

During the 1970s, as the popularity of behaviorist educational theories declined, a new strand of CAI emerged that was reliant on cognitive psychology. CAI programs of this type tended to rely on conceptual models of how particular cognitive processes worked. For example, a task such as reading could be divided into higher-level processes, such as understanding the narrative, and lower-level processes, such as decoding particular words. A particular piece of software could be targeted at either the higher or lower processes, and the aim would be to move the child toward a point where the student's process in dealing with the information matched the conceptual model of how an expert would process the information.

In general, the cognitive psychology branch of CAI was more innovative and interesting than the behaviorist branch. This was, in part, due to a far greater degree of theoretical flexibility; while behaviorist CAI was stuck with its "atheoretical" strategy of programmed frames, cognitivist CAI could choose from a diverse selection of theoretical frameworks and strategies with which to enact those frameworks. This latter point is especially important; since the cognitivists were free to reject the behaviorist strategy of incremental learning, they were free to create far more interesting computer-controlled

environments in which children could immerse themselves.

The Legacy of Teaching Machines

During the 1980s, the term *computer-aided instruction* faded from use in favor of the term *educational software*. This decade witnessed the rise of the personal computer, which was accompanied by an explosion of interest in educational software development. Some of this software followed in the footsteps of cognitivist and behaviorist CAI, but the most popular titles (e.g., Oregon Trail, Carmen Sandiego) were not as closely tied to learning theory as were the CAI efforts of the 1960s and 1970s. The educational software market eventually faded in the 1990s and 2000s as the more lucrative entertainment and productivity markets captured the interests of commercial software companies.

Today, it would appear that very little trace remains of the teaching machine movement of the 1960s. None of the hardware remains in schools; the only place one can buy a Skinnerian teaching machine is from a junk dealer or an online auction site. Yet the absence of the hardware belies the fact that the basic technology of the teaching machine is still going strong. Behaviorism may be moribund as a theory, but a significant proportion of today's best-selling educational apps employ a frame/reward design and move children gradually through a predefined program. On the level of substance, the only difference between these programs and the Skinnerian teaching machines is that the reward system of the newer programs is substantially more compelling. Whereas a teaching machine might have rung a bell as a reward, a contemporary piece of educational software may offer fun animations, praise, and a numerical score, all amid a package of flashy graphics, a bouncy soundtrack, and a dash of social media integration. It is tempting to assume that the failure and disappearance of teaching machines stemmed from the narrowness of behaviorist educational theory, but its failure may actually have been due to the inadequacies of 1960s technology. In their new, revitalized form, teaching machines may well continue to have an effect on the educational landscape for some time to come.

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See also Behaviorism; Cognitive Revolution and Information Processing Perspectives; Technology and Education

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TECHNOLOGY AND EDUCATION

There is an apparent but misleading simplicity to the concept of technology in education. Yet technology plays multiple roles in education and needs to be understood in terms of how it integrates with the entire learning ecosystem.

To a contemporary educator, “technology” may simply imply the use of computers, perhaps in the guise of the Web, tablet computers, or digital cameras. Yet for a previous generation, “technology” meant other audiovisual tools, such as slide projectors or tape recorders. So conceived, technology might mean any device designed to make learning more effective. The focus then is on the benefits and costs of introducing that device into a classroom. Usually, the device so introduced is new for the user. Thus, a network router is a technology, but a book, chalkboard, or poster is not. A challenge for analysis is that for later generations, today’s technology may become invisible as the focus shifts to the latest device.

The design of any tool reflects not only its ostensible function but also the sociopolitical context in which it is used; and people adapt a given technology for purposes other than that for which it was intended. This entry explores the complex relationship between technology and education and the ways in which the nature of learning itself is deeply enmeshed with the available technology. It also considers how contemporary technology for

learning is affecting, and in turn is being shaped by, classroom practice.

Conceptions of Technology

There are larger conceptual problems with the above-stated view of technology: It leads to conclusions about the effects of technology that are tied to particular devices but do not reflect underlying processes. The benefits and costs of technology are then constrained to what happens to be considered technology at a given time. Most important, this view obscures the relations among values, aims, methods, and evaluation in education. It also makes it difficult to assess the various relations between technology and education, three of which stand out: (1) learning through technology, (2) learning how to use technology, and (3) learning about technology.

First, any form of education involves *technê*, what Aristotle calls the concern “with bringing something into being.” Thus, technology in education is the craft by which we accomplish education. It includes not only physical devices but also instructional procedures, formulations of curriculum, pedagogical heuristics, as well as the shiny devices that we regularly employ, often with great hope and future disappointment. The most iconic artifacts of education—books, chalkboards, math tables, notebooks, and bells—are technology, as are the ideas of semesters, 50-minute periods, grade levels, and standardized tests. Thus, technology is not an add-on to education; it is what we do when we enact education. We might call this the way we learn through technology.

It is important to note that, in general, we need to consider not one device or procedure but an array of them, each with its own rationale and history, and which interact in complex, often unpredictable ways. Moreover, we need to understand that array in the context of a learning ecology.

Consider just one of many such examples. The *Boston College Educational Seismology Project* offers an opportunity for students, teachers, and their communities to learn through direct involvement with scientific research. The project is operated by Weston Observatory, a research laboratory at Boston College. Inexpensive seismographs are set up in K–12 schools, colleges, and public libraries. Students can view, in real time, seismic disturbances caused by distant earthquakes, hurricanes, nearby construction, trucks passing by, or students jumping up and down. Through an inquiry-based learning

approach, students can study their own seismograph, compare its output with others through the Web, and correlate what they find through online sources. For example, the U.S. Geological Survey has free videos, simulations, data sets, maps, imagery, publications, and other learning tools.

Seismology is an interdisciplinary science that requires understanding a wide range of concepts in mathematics, physics, chemistry, biology, paleontology, astronomy, and other areas. Hands-on activities, field trips, construction of seismographs, and other approaches can be coupled in the learning ecology with the seismograph *per se*. Seismology also implies learning about how the natural environment affects society and vice versa. Thus, a project such as this offers possibilities for introducing students to the nature of scientific inquiry and to the importance of science in their lives. It also supports experiential learning and communities of learners, teachers, scientists, and the larger public.

At the same time, what the project means in a given setting depends on far more than the seismograph, computer, network, and other hardware, or even the curriculum and instructional activities. Placement in a public library has consequences different from those in a school. Involvement of parents and others in the community can make an enormous difference. Relations between libraries, schools, community groups, the university, and others are more determinative of what occurs than the technology in a narrow sense. One might well ask which students have access to tools such as this, where access has to include all aspects of support, not just the devices themselves. An example like this shows that if we seek to understand the meaning of technology for education, we need to move beyond questions such as “How effective is it?” and to consider questions in the realms of political economy, sociology, curriculum, and more.

Second, the argument that technology is the means of education holds an analogy that implies a second relation. The enterprises that we engage in beyond the learning setting are themselves complex and ever changing. They too involve diverse arrays of technology, so much so that it makes little sense to talk of learning about the enterprise without learning those technologies. For example, any of the sciences today are deeply enmeshed with technology. Biology as we now know it could not exist without various types of microscopes and imaging tools, gauges to measure physical and chemical processes, seismometers to study land formations, simulations software,

visual displays, and computerized databases of proteins and DNA. To learn biology means to learn these technologies, not simply the results that they produce. The social sciences, humanities, business, and other enterprises have always depended on the technologies of their day—books, maps, charts, tables, concordances, dictionaries, and so on. The changes in their practice with new technologies, such as digital texts or geographic information systems, similarly call for new kinds of learning about those new technologies. Thus, we need to learn how to use technology as well as to use it as a tool to learn other things.

Third, the way that technologies are involved in all human activity means that education implies the need to learn about technology. For example, the political revolutions of 1848 spread across Europe rapidly because railways and steamships served as more than transportation; they were communication tools. The Twitter revolutions of today occur in different ways, but both depend on, are shaped by, and shape the means of communication. Wars are increasingly fought through cyberspace, including hacking of government sites and propaganda campaigns contested through Twitter hashtags.

Though we may think of writing as a cerebral activity, far removed from the world of things, it has always been material, whether involving inscriptions on Sumerian tablets or gestural expression in a virtual reality theater. New technologies mean that the writing continues, but it does so with new configurations of connectivity (e.g., one-many communication becomes many-many), and new modalities arise, including video, animations, real-time graphics, interactive maps, and geolocation.

Daniel Headrick shows through numerous examples how examination of the information and communication tools of an era helps us understand why and how changes occur. He makes a good case for the idea that the information age began as people developed better tools for handling information, such as time zones, postal codes, encyclopedias, and latitude and longitude lines. Computers enabled speeding these tools up, but the fundamental operations were established long before. Because history is in part an account of how our doings change, it is perforce a story of technology. Thus, if we are to learn about virtually any topic, we need to understand the evolution of the relevant technologies.

Understanding these changes is part of what it means to learn about technology. But that challenge is not limited to communications.

Technology's role in medicine, manufacturing, business, sciences, and all other realms of life needs to be understood, raising as it does social, ethical, political, scientific, epistemological, and practical issues of daily life.

Technology and Social Relations

Technology thus manifests complex relations with education. These relations necessarily invoke political and ethical questions, starting with the very construction of a tool. Although we may describe a tool in simple functional terms, its design reflects, and tends to reinforce, a sociopolitical context.

For example, the simple American Standard Code for Information Interchange (ASCII), representing letters, numerals, and other symbols, has been widely used as a standard format for computers. To some, the code appears uncontroversial, almost self-evident, for example, A = 65, B = 66, C = 67, and so on. Yet the code is limited. To minimize memory demands on early computers and physical demands on input/output devices, it requires just 8 bits of information. This means that only 128 characters can be represented. As a result, the \$ (36) can be represented, but not the € or ¥. All of the uppercase and lowercase letters used in English are there, but not the ñ of Spanish, much less the characters needed for Arabic or Chinese. In general, these choices were ramified in keyboard design, printers, and display technologies. The early teletype, the ASCII code, algorithms, computer training, and more served to reify what counted as plain, ordinary, or natural. Increases in the capacity of computers and network, plus awareness of the limitations of ASCII, led eventually to the implementation of Unicode, a 16-bit system. Unicode is far more versatile and is used in almost all new information processing systems, though it is still not truly universal.

The limitations of ASCII meant that English-speaking computer designers and users in the United States had advantages that reinforced that country's early entry into the digital era. The technology also connotes ideas about what is direct, simple, and natural—assertions that have no basis beyond the design choices, yet have power in social relations and identity formation. The desktop metaphor itself is not politically neutral, nor are most other aspects of any technology. Information itself is increasingly commodified. Corporations have recognized the resulting economic value and now seek to control its production, transmission, and consumption. This is

leading to political and economic changes, including the growth of a transnationalizing culture industry.

"Digital" has come to signify global interconnection and the path toward the future for diverse populations. However, even with technologies such as Unicode, the "universalist" presupposition of the digital is questionable. On the periphery, there are alternatives, such as the free software movement or rural hack lab spaces in Peru where Latin American software activists collaborate, engaging distinct materialities of history, culture, nature, politics, and information. Such alternatives show how the choice of technology and its use is far from value free. The alternatives represent significant challenges and opportunities for global understanding and truly public education.

Continual (Re-)Creation of Technology

Scholars of technology in education often speak about affordances and constraints. The term affordance was introduced by J. J. Gibson; it means an action possibility posed by an object. For example, the handle on a coffee mug offers the possibility of secure lifting without burning one's fingers. However, it only suggests that possibility. One could choose another means of lifting the mug, or not lift it at all. Affordances seem like an unalloyed good, but they may cause problems when they incline a user toward an inappropriate path. Consider the case of a site for making web pages that encourages the use of multiple fonts and clashing design features. The affordance of freedom to create may not work best for a novice. Or, think of a web resource that foregrounds the "progress" perspective of westward U.S. expansion versus one that foregrounds the perspective of indigenous people.

Conversely, a constraint makes it difficult to carry out certain actions: Early word processors had no simple means for including video. With more advanced tools, many people can now write with video, intermixing video elements, audio voiceovers, and conventional text. Constraints can also be useful. For example, a science simulation might simplify a complex process, thereby constraining the operations a student can carry out, but making it easier to learn basic aspects of that process. A question for any technology in the classroom is thus what affordances it offers and what constraints it imposes. Following that, one may ask how those affordances and constraints relate to pedagogical goals. Moreover, neither the affordances nor constraints are fixed.

When people do use a technology, they often change it from what the designers intended (the idealization) to their own technology-in-use (the realization). In some cases, they *reinterpret* the technology. For example, graffiti tags do not change the physical and functional aspects of a building, but there is a semantic claim to possession of the space as a canvas for art, cultural resistance, or criminal turf war. In a classroom, a teacher may use a general purpose word processor as a display tool or for students' creative writing, language drill, or playing games. In other cases, users may significantly adapt the technology's semantic association and use. For example, cassette tape players were marketed to Bedouins in Egypt for listening to music from the dominant Egyptian majority. The users discovered the unused recording capability and began to record their own songs, leading to the rise of a Bedouin pop star, and eventually the creation of new economic and cultural opportunities. Finally, there can be reinvention, which changes the semantics, use, and structure. Although automobile shock absorbers were originally produced to reduce shock, to soften the ride, Latino mechanics developed methods for attaching them to air pumps and use them as shock producers. The new functionality in the resulting low-rider cars violates both marketing and design intentions. What this means for the classroom is that the new technology is not simply an independent variable causing certain effects; it is also a dependent variable, something that gets shaped by the classroom culture.

Technologies for learning have constrained flexibility. They are cultural artifacts manifesting the social relations, beliefs, values, and economics of those with the power to create and implement them. On the other hand, educational or any other use may alter those relations. Ideology, and ultimately political economy, is thus woven through the process of technology. It influences the design of technologies based on the purposes and values of the designers or the buyers. This includes explicit values such as assuming that e-books are the future, that they represent a cost savings, and that therefore all students should learn using e-books rather than paper. Second, ideology affects the distribution of technologies, including how much is worth spending for different groups of students. There may be semi-hidden assumptions, such as that low-performing students need drill-and-practice software, whereas high-performing ones need software for creative use; and there are questions of access. Third, it affects

the use of technology, including the learning subject areas in which it is applied and the purposes. Finally, it affects how we interpret the effects of technologies. For example, a literature student could find a Shakespeare quote quickly on the Web. However, the instructor might deem this easy access as negative if the use of quotations was supposed to be an indicator or instigator of deep reading.

Bertram C. Bruce

See also Intelligent Tutoring Systems; Learning, Theories of; Teaching Machines: From Thorndike, Pressey, and Skinner to CAI; Technology and Society, Critiques of

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TECHNOLOGY AND SOCIETY, CRITIQUES OF

A critique of technology and society is a systematic examination of the problematic relationship between technology and social change. Several sizable disciplines—including the philosophy of technology, science and technology studies, and feminist philosophy—regularly engage in this type of analysis. To complicate matters further, many educational theorists have discussed how school curricula should respond to the prevailing technological environment. Hence, it is impossible to encompass the full scope of critique in this entry, which will offer only a sketch of some of the most influential genres of critique that have emerged over the past 150 years. Adapting a classification developed by the philosopher of technology Andrew Feenberg, the critiques may be grouped into five categories: (1) determinism, (2) substantivism, (3) instrumentalism, (4) left dystopianism, and (5) constructivism. After a brief description of each type of critique, the entry outlines some of the key ideas of the principal exponents of these theories and describes some implications for education.

Determinism

Technological determinists, a group of thinkers among whom Karl Marx is the most prominent, believe that the state of technological development determines to a significant extent social (including

educational) and political forms. For example, in the case of 19th-century industrial mass production technology, the nature of production is such that there are many unskilled and semiskilled laborers who run the machines and relatively few factory administrators. This division of labor is thus determined by the nature of the technology itself; it spawns a particular set of social and political forms that grow up around it, and it leads to schools having the function of producing docile workers. In the case of industrial production, a relatively small class of owners will likely develop, with a large class composed of the workers who run the machines. Thus, according to this theory, the prevailing social arrangements are heavily influenced by the state of technological development.

In keeping with this view, different sets of productive technologies would tend toward different social results. The technologies available to hunter-gatherer societies, for example, produce a division of labor that is far less marked. Everyone in the tribe has to engage in a variety of productive tasks, and little in the way of surplus available. This set of productive technologies, therefore, results in a more egalitarian social framework.

According to the determinist view, as new productive technologies are invented, these technologies spawn new divisions of labor, which are in substantial conflict with the older social forms. The 19th-century battle between small-scale industry and large-scale industrial production is a paradigm case of this conflict; the older social forms that corresponded to the older technology put up a fierce resistance but were eventually largely swept away. Still, this does not mean that human agency is ruled out entirely by determinism, as these social changes can be brought about more or less rapidly, depending on how groups in the society organize themselves to resist or promote the change.

Although Marx and other determinists are often critical of the social forms resulting from technological change, they do not think that technology itself is inherently problematic. Determinist views of technology vary from positive to neutral; new technologies bring new divisions of labor, which then stimulate the development of new social forms, which precipitate conflicts between the old and new social forms. There is also little room for collective human agency in terms of the development and employment of technologies. The expansion of our productive capacities is an essential element of being human for Marx, and each generation inevitably

builds further on the productive forces of the previous generation. There is no possibility of collectively deciding to abandon productive technology; once we have it, we do not give it up.

Substantivism

Substantivist critics of technology share some ground with the determinists in that they regard technology as largely beyond collective control, but they differ radically in their assessment of its value. The substantivists believe that modern technology is value laden in a profoundly negative sense because it brings with it a reductive and destructive way of thinking. Two of the most prominent examples of the substantivist approach are Martin Heidegger and Jacques Ellul.

Heidegger's (1954/1977) best-known work on technology is a short essay, "The Question Concerning Technology." Heidegger begins the essay by noting that our modern modes of production constitute a substantial change from previous craft production. Heidegger suggests that in ancient times, craftsmen paid careful attention to the material, form, and intended use of what they produced; he calls this mode of production "bringing-forth." Modern technology, by contrast, is characterized by a mode of production that Heidegger calls "challenging-forth." When one thinks in the mode of challenging-forth, one "sets upon" nature in a dual sense—the sense of ordering nature to one's own ends as well as the more sinister sense in which a hungry animal would "set upon" its kill. When thinking in the mode of challenging-forth, things are stripped of their aesthetic value and reduced to the status of a mere resource. For the person thinking in this way, a forest is not a place with its own right to exist or with aesthetic value but is simply a certain quantity of lumber.

Heidegger does not leave much room for human agency in his account of the thinking behind technology. To use a Heideggerian phrase, we are "always already" trapped in a particular orientation to the world that allows us to think in the mode of challenging-forth and in other reductive ways. Heidegger calls this broad orientation enframing (*Ge-Stell*), and he believes that we have been caught up in it since the beginning of modern production. Heidegger alludes to the possibility of alternatives to this technological trap, but these approaches would require, at a minimum, coming to grips with the dominant technological paradigm, which is challenging due to the fact that it is invisible to most people.

A vital distinction for Heidegger and other substantivist thinkers is the difference between technology as a way of thinking and particular technological artifacts. For Heidegger, it is not this or that machine that is significant as far as modern technology is concerned; it is, rather, the presence of a particularly destructive way of thinking that lies behind the employment of machines that is concerning. In other words, it is the overall orientation toward the world that lies behind technology that counts, not the particular technologies themselves.

Although Heidegger is the most well-known exponent of the substantivist critique of technology, Jacques Ellul, a French social theorist, is less obscure and more convincing in his analysis, which can be found in *The Technological Society* (1964). Ellul, like Heidegger, is concerned about a particular way of thinking, which he calls *technique*. Technique can be defined as the ensemble of the efficiency maximization efforts that have been applied to diverse domains of our lives, including, most obviously, machinery but also in workplaces and in social institutions like schools and government. Thus, wherever there are efficiency maximization efforts, there is technique.

Ellul exhaustively traces the development of technique in various sectors, including the economy, the state, and education. Like Heidegger, he believes that this phenomenon is basically autonomous and field independent. It doesn't matter what is being rationalized, whether it is a factory, a university, or a government department; the important thing is that efficiency be maximized. Due to its incredible effectiveness, this criterion overrides all others and assimilates all other discourses to itself. The only thing to which technique must adapt itself, Ellul thinks, is biological and physical laws. Even here, one can modify the process itself to work around the inefficiencies of biology and physics. If the human need for sleep slows down production, one simply produces the product with machines, and if bread does not rise consistently within the factory, one changes the ingredients of bread so that it does.

Ellul offers no possible solution to his pessimistic diagnosis in *The Technological Society*. If humans attempted an act of mass resistance or destroyed themselves through a nuclear holocaust, escape from technique might be possible, but Ellul actually sees the latter situation as being more likely than the former. He sees nothing in the current world situation that might warrant any hope whatsoever

for escaping the phenomenon of technique and believes that technique will continue to develop autonomously.

Instrumentalism

Instrumentalism, in its most basic sense, is the commonsense view that technology is a neutral tool that we control. This view represents the polar opposite of the substantivist conception held by Heidegger and Ellul. Since the basic instrumentalist view is so widely held, few philosophers have made an effort to espouse it explicitly.

John Dewey, however, offers a more philosophically interesting version of instrumentalism. As Larry Hickman explains, Dewey views abstract ideas and social practices as tools for addressing felt difficulties, much as a shovel or a paintbrush is a tool with which one would resolve a problem in everyday experience. The process of inquiry, broadly considered, is how humans deal with problems arising from experience, and technology, in the broad Deweyan sense of the term, plays a key role in this process in that it provides the tools for dealing with the difficulties. For example, in Deweyan terms, the idea of justice is a technology that could be used for thinking through a variety of problems of both the everyday and the highly theoretical variety. Inquiry also involves the reconstruction of the tools themselves to refine the existing tools or possibly create new ones. Philosophy is a fundamental part of this process as far as conceptual technologies are concerned. In his classic educational writings, Dewey describes how the elementary school curriculum, embodying activities and inquiry focused on “occupations” common in the external social environment, can equip youngsters with the skills and background knowledge to understand the technology of their times.

Although Dewey is rather moderate and conventional in his criticisms of technology (especially when compared with thinkers like Heidegger and Ellul), Deweyan instrumentalism nonetheless provides an interesting platform with which to launch critiques that are sympathetic to some of the concerns of the substantivists. If, for example, one looks at Ellulian technique as an intellectual technology that has run amok and that may need to be radically reconstructed or discarded, one can see the critical potential of Dewey’s point of view. Dewey’s perspective has the additional merit of offering more hope

for human agency in dealing with the challenges that technology presents to contemporary life.

Left Dystopianism

Left dystopianism describes a broad set of views that are deeply critical of technology and see it as nonneutral but that do not hold that technology is autonomous in the way substantivism does. Given the large number of thinkers who fit within this category, this account must be limited to Herbert Marcuse and Michel Foucault, two of the most prominent individuals who can be classified within this group.

Marcuse was a student of Heidegger, and while he does not reprise Heidegger’s substantivist thinking about technology, he does adopt Heidegger’s intensely negative outlook on modern society. Writing in California in the 1960s, Marcuse saw a society that had been anaesthetized by consumer culture. The class antagonisms in which Marx had seen revolutionary potential had been smoothed into a mass consumer culture in which everyone, from the rich professionals to the poorer workers, had similar sets of preferences. Technology in the machine sense was necessary for the rise of this culture, but it is the social technology of the mass consumption/mass production society that really preoccupies Marcuse. Whereas the workers of Marx’s time felt their alienation keenly, workers in the new society genuinely believe in the consumer society and feel that they are free within it. Individuals in the new society are entirely one-dimensional; not only do they work to uphold the expansion of the productive and consumptive order, but they conform to it in their inner lives as well. The media, politics, education, and the shape of everyday work life are all implicated in the development and perpetuation of this mass leveling down of humanity.

Given this dystopian perspective, it is not surprising that Marcuse is not very hopeful about the future. Like Ellul, he thinks that the technological society is dedicated to continued expansion of its project of dominance over humans and nature, and he sees no immediate end to this. Nonetheless, he does have some hope for the future. Marcuse feels that the fact that this expansionist project is continually generating increased material abundance creates the seeds of instability within the oppressive status quo. The end of scarcity would mean the end of the rationality of the technological society’s expansionism, and the breakdown of this justification could create the space for alternative visions.

Whereas Marcuse's work is best viewed as expansive social criticism, Foucault works according to a historical method in which he painstakingly analyzes the development of particular modern concepts like madness, sexuality, and punishment. Although the dominant view is that we have made progress in our understanding of these concepts, Foucault argues that these ideas have, in many ways, become far more oppressive as they evolved over time. For example, in his investigation of punishment in *Discipline and Punish* (1975/1995), Foucault notes that in the 18th century, the dominant practice was to enact spectacular public penalties that would impress on the people the seriousness of the crime committed. This method, however, was not particularly effective at producing public order and often backfired when the spectators responded sympathetically to the prisoner. In his analysis, Foucault shows how we have moved from these primitive beginnings to techniques of order and punishment that, while involving less overt violence, are insidious, oppressive, and pervasive. His famous example is that of Jeremy Bentham's Panopticon, a proposed prison in which prisoners could be monitored at all times, the better to reform their behavior. In the same work, he also documents how disciplinary power was deployed in schools both in examinations and in everyday classroom life.

Throughout his work, Foucault demonstrates how the human sciences' creation of concepts and categories enables the development and exercise of what he calls power/knowledge. By creating a particular scientific category (e.g., the delinquent), the human sciences not only develop new knowledge but also simultaneously begin to be able to exercise normalizing power on the people found within that new group. Like Marcuse, Foucault did think that resistance was possible, and he urged that people learn from the experiences of those who had been subjugated and marginalized by the system. Intellectuals should not aspire to create new utopias, which would simply create fresh oppressive schemas, but they should rather work to expose the contradictions and tensions within the existing system, much as Foucault did in *Discipline and Punish*.

Constructivism

Constructivism, which shines a critical light on the social processes that underlie the development of scientific facts and technological objects, has a strong kinship with Foucaultian ideas. In his pioneering

Laboratory Life (Latour & Woolgar, 1986), Bruno Latour, a leading figure within constructivism, attempts to trace what he calls "the construction of a fact" within a scientific laboratory. He traces how people use machinery and various kinds of social relationships to bring a statement from a shaky hypothesis to the point where it is an unquestionable fact. In *Science in Action* (1987), Latour applies the same analytical frame to technology, showing how a technology moves from a shaky prototype or offbeat invention into something that everyone feels compelled to use. Latour argues that science and technology are usually conceived of as developing autonomously—in other words, people think that scientific and technological developments simply spring up and then diffuse (or fail) on their own merits. This, he argues, ignores the intricate social processes of construction that make facts seem solid and inventions seem necessary.

Latour is keen to create the capacity among citizens to resist the apparent necessity of scientific and technological developments, and he hopes to do this by revealing the construction processes going on behind the scenes. In recent years, feminist science and technology scholars have taken a critical approach that has some similarity to this approach. In a much-cited essay, the anthropologist Carol Cohn analyzes how defense scholarship has developed a scaffold of sexist and antiseptic concepts to enable comfortable theorizing about technologies of mass violence and death. Other examples of critique in this vein include those by the philosophers Helen Longino and Rebecca Kukla, who examine some of the gendered choices that lie behind theoretical frameworks in science and in the medicalization of the birth process, respectively. Approaching the issue from the standpoint of citizenship, Sheila Jasanoff calls for a public assessment of technologies that subjects them to a broader set of analyses that includes both an analysis of how the technological problem is constructed as well as a wider, more thorough assessment of costs. All of these scholars are keen to shed more light on the choices that lie behind every practice of science and technology and to point out how those choices could be otherwise.

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See also Apple, Michael; Critical Theory; Dewey, John; Foucault, Michel; Heidegger, Martin; Marx, Karl; Reproduction Theories

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THEORIES OF ACTION

Theories of action are theories that link behaviors or actions with both the beliefs and values that give rise to them and their intended and unintended consequences. They are theories, like any other, in the sense that they provide an account of the relationships between a series of claims—but in the case of

theories of action, the claims are about how to act, under particular conditions, in order to achieve the intended consequences. From the point of view of the observer, a theory of action explains a person's action by identifying the reasoning that produced this action rather than alternatives. From the point of view of the actor, a theory of action is a theory of design—it specifies how to achieve what one wants in a given situation. Since actions occur at individual, interpersonal, organizational, and even societal levels, the concept of a theory of action applies to any of these units of analysis.

Components of a Theory of Action

Theories of action were first described by Chris Argyris and Donald Schön in their now classic 1974 book *Theory in Practice: Increasing Professional Effectiveness*. Some of the properties of a theory of action are best described by using an example. Take a chief executive officer (CEO) who decides to introduce a major change in his organization by describing the need to adapt to increasing competition and new market opportunities. His speech focuses exclusively on the future but provides no explanation of why a radical restructuring of current operations is required to meet the challenge he describes. Staff members are left puzzled about why the CEO is, in their view, trying to fix something that they believe is not broken. They resign themselves to more change for change's sake. The explanation for the CEO's behavior (he provides only a future-focused rationale for change) lies in his theory of action—the goals he wishes to achieve, his implicit assumptions about how to be effective in such situations, his desire to be positive, and his belief that an evaluation of the current organization would be seen as negative. This complex theory leads him to avoid any explicit reference to the shortfalls of the organization's current practice. Such discussion is ruled out by his desire to be positive and by his assumptions about what that value implies.

Theories of action have three components. In this brief example, the theory of action of the CEO can be summarized as follows: “Get the staff on board by stressing positive future opportunities and avoiding criticizing current practice.” The first component is values and associated beliefs—the desire to be positive and avoid the negative. These values explain the observed actions (the second component), including the fact that the CEO did not disclose his evaluation of

the current organization because that would have violated his value of avoiding the negative. The third component of a theory of action comprises the intended and unintended consequences of the actions—in this case the staff's understanding of the future challenges (the intended consequence) and the belief that these could be met without the radical change proposed by the CEO (an unintended consequence).

Two Types of Theories of Action

The distinction between two types of theories of action is fundamental to a correct understanding and application of the concept. *Espoused theories of action* are those that people claim, believe, or report to be the basis of their actions. When leaders describe how they intend to lead a meeting, or report on how they believe they have led a meeting, they are describing their espoused theory of meeting the leadership. *Theories-in-use* are the theories of action inferred from how people actually behave, as directly observed or recorded through audio or video recording.

This distinction between espoused theories and theories-in-use has important implications for research methodology. Data obtained from questionnaires, interviews, focus groups, diaries, or any other type of self-report provide evidence about people's espoused theories and should not be used to draw conclusions about actual actions and practices. Such inferences can only be drawn from the evidence provided by recordings, observations, or carefully checked behavioral reports. Many studies fail to make the distinction between espoused and in-use theories of action and draw mistaken conclusions about practice from interview and questionnaire data.

While obtaining data about actual practice is an essential step in constructing an actor's theory-in-use, information is also needed about the reasoning that explains the behavior. Since this reasoning is usually tacit, particular care is required in making it explicit and in testing the validity of the resulting inferences. The researcher must probe beyond actors' immediate justifications and establish that the explanations they have put forward actually rule in the observed behaviors and rule out the use of other possible responses. Case studies that include a careful explanation of such methods are available in many of Argyris's books.

A theory-of-action approach has also been taken in case studies of school leadership, policy implementation, and program evaluation. The contribution of such studies goes well beyond identifying

the familiar discrepancy between policy and practice or between program objectives and program implementation. By revealing theories-in-use, such studies identify the reasoning and logic that account for these discrepancies, and provide important clues about what is involved in their reduction. If all human action is anchored in theories of action, then learning about such theories would seem to be the first step in understanding what is involved in change. The target of interventions is not behavior per se but the theories-in-use that sustain it. In many cases, especially when resistance is anticipated, accurately identifying such theories should be the first step in the design of intervention strategies.

The degree of congruence between espoused and in-use theories of action is a matter of empirical investigation. There are at least two reasons why large discrepancies are common. First, our tacit and largely automatic reasoning processes operate at high levels of abstraction, so our self-reports and private reflections are seldom grounded in our actual words or actions. If we practice abstract rather than behavioral reporting, we may lose the ability to recall the grounds for our inferences and attributions, and our reflections and reports will be informed more by our espousals than by our actual behavior. Second, norms of politeness and face-saving prevent us from pointing out the discrepancies we perceive between our perceptions of others and their self-perceptions. Both of these factors serve to keep us blind to the discrepancies between how we see ourselves (our espoused theory) and how others see us (theory-in-use).

Evaluating Theories of Action

Theories of action, like any type of theory, are more or less adequate. The CEO's theory of how to introduce change is one of many possible alternatives. He could, for example, have chosen to disclose rather than withhold his views about why restructuring was needed to meet the competitive challenges he foresaw. How does one evaluate the adequacy of competing theories of action? What criteria are relevant? Argyris and Schön propose three metalevel criteria, that is, criteria that are applicable to all theories of action regardless of their content. The *congruence* criterion evaluates the extent to which a person's theory-in-use matches the espoused theory. In layman's terms, this is equivalent to judging whether the person "practices what he preaches." Although congruence is desirable because it signals self-awareness and authenticity, it is insufficient for

evaluating theories in action. There is nothing particularly desirable about acting congruently with an unjust, controlling or self-limiting espoused theory. Similarly, there may be much to admire about individuals whose behavior falls short of the high standards of professional and ethical practice that they espouse. Such incongruence can provide a powerful incentive for learning and improvement.

The second criterion evaluates the *effectiveness* of a theory of action. Such theories are effective when the actions taken achieve the intended results. The CEO wanted to focus the staff on future challenges and opportunities and to do so in a way that was positive and generated enthusiasm for change. His theory would be judged ineffective if his staff were left feeling skeptical and suspicious rather than enthused and energized.

The third criterion for theoretical adequacy recognizes that *goal achievement*, like congruence, can be problematic. If goals are not necessarily desirable, then achieving them is not sufficient for claiming an adequate theory. Theories of action have powerful effects on the world, so a criterion that judges the quality of the world they create is a central consideration in their evaluation. The CEO may have achieved his goal of motivating his staff, but what are the long-run consequences of a theory of action that suppresses discussion of current problems and labels it as negative talk? By considering the behavioral world created by a theory of action, the evaluator steps outside the values and goal of the particular theory of action to take a wider view of its implications. This third criterion, which involves judging the value of the behavioral world created by the theory-in-use, raises normative questions that go beyond the assumptive framework of any particular theory.

This third criterion means that theory improvement not only involves adjusting behavioral strategies to achieve desired purposes but can also include revision of those very purposes. Based on the writing of the pioneering systems analyst Ross Ashby, Argyris and Schön called the adjustment of behavioral strategies single-loop learning and revision to central values and purposes double-loop learning. It is double-loop learning that offers the possibility of going beyond the status quo and of transformational change. We turn next to the empirical work that has led Argyris and Schön to conclude that the vast majority of people hold theories of action that prevent them from engaging in double-loop learning.

Model 1 and Model 2

In a 50-year research program on theories of action, Argyris and Schön gathered hundreds of transcripts of meetings in which staff of both profit and not-for-profit organizations addressed significant challenges and made key decisions. Their analysis of the transcripts showed that the theories-in-use employed by the staff at these meetings had so much in common that they exemplified a generic, well-nigh universal theory. Regardless of race, gender, age, or experience, the same set of *interpersonal* values and assumptions were evident. This “master program,” which they called Model 1, was characterized by three main interpersonal values: (1) define goals and try to achieve them, (2) maximize winning and minimize losing, and (3) avoid generating and expressing negative feelings. These values give rise to commonly observed action strategies such as unilateral management of the task (e.g., imposition rather than negotiation of goals and purposes), unilateral management of the other person (e.g., privately deciding how he or she should be treated), unilateral protection of self (including defensive strategies such as blaming others rather than considering our own contribution to the problem), and unilateral protection of others (e.g., withholding or disguising negative feedback). The consequences of such Model 1 values and strategies include low-quality decisions made on the basis of censored information, low commitment to those decisions, increasing mistrust, and limited individual and organizational learning.

The prevalence of Model 1 is partly explained by the limitations of human memory and information processing capacities. Talking in abstractions, making leaps of inference, disconnecting those inferences from supporting reasoning and evidence, and noticing confirming and not disconfirming data enable us to make sense and act quickly. The price we pay for this efficiency is that we make mistakes, and it is easier to spot those made by others than by ourselves. Put these cognitive capacities (or incapacities) together with a socialization that teaches that public detection and correction of error is threatening, and we have the recipe for the Model 1 organizational world that Argyris describes.

Model 1 lies in stark contrast to the interpersonal values and behaviors of Model 2—an interpersonal theory of action that is widely espoused but seldom practiced. The central value of Model 2 is that of truth seeking—the quest to improve the quality of our reasoning about ourselves, other people, and the

work we do. If thinking is to be improved through open debate and critical scrutiny, then people need to be free to express their views, to make informed choices, and to take responsibility for monitoring the consequences. The behavioral strategies associated with these Model 2 values are joint design of situations, so that people experience high personal causation, joint rather than unilateral control of tasks, and bilateral rather than unilateral management of emotions, so that people are protected without sacrificing learning. In Model 2, views are held openly, differences are welcomed as opportunities to test validity rather than to persuade, and power is shared so that what is relevant and productive can be jointly determined. Double-loop learning is possible because problem solving is valued above preservation of the status quo, and the difficulties of change are discussable and managed in a way that cares for the task and the people without unilaterally sacrificing either.

Conclusion

Theories of action are perhaps the most powerful of all our theories, for they solve our practical problems of how to achieve our purposes. They guide our own actions, provide explanations for those of others and, most important of all, shape the interpersonal and organizational worlds in which we live. When perceptions of mistrust are acted on in nonlearning ways, they create more mistrust; when the same perceptions, under a different theory of action, are disclosed and respectfully tested, trust increases. When the implicit theory of action in a proposed policy is made explicit and vigorously debated, the probability of the policy producing improvement is enhanced; when power relations and defensive reasoning shut down debate, the probability of improvement is diminished. Critical inquiry into the content and adequacy of our theories of action, through both real-time dialogue and more formal research, is central to the improvement of social practice.

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See also Reflective Practice: Donald Schön; Single- and Double-Loop Learning

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THEORY OF MIND

When trying to predict and explain people’s behaviors, we often attend to their minds—that is, we make sense of others’ actions by considering their desires (e.g., What does she *want*?), intentions (e.g., Did she *mean* to do it?), beliefs (e.g., She *knows* what happened), thoughts (e.g., She *thinks* this will work), and emotions (e.g., She feels *happy*). Over the past 30 years, developmental scientists have established a large body of research on age-related changes and individual differences in children’s *theory of mind*—a term commonly used to refer to reasoning about the internal mental states and emotions of self and others. This entry gives an overview of theory of mind research, including consideration of the biological bases and sources of individual differences in typical and atypical populations, and concludes by considering theory of mind in academic settings.

Understanding False Belief

The “gold standard” test of theory of mind is the *false-belief task*, first created by Wimmer and Perner (1983). Although numerous variations have since been devised, the basic core of the task is as follows. Person A places an item in Location 1 and then leaves the room; Person B moves the item to

Location 2; Person A comes back and wants his or her item. Children are asked to predict where Person A will look for the item, to judge where Person A thinks the item is located, and to recall where Person A originally placed the item. In addition to this change-of-location false-belief task, there is also an unexpected-contents false-belief task. Here, children view a common distinctive container (e.g., a crayon box). They state what they think will be inside. Then, the experimenter opens it up and shows its unusual contents (e.g., rocks). The experimenter then closes the box up and asks the child to report what he or she originally thought was in the box, what a naive person (e.g., a friend) would think was inside the box, as well as what is really inside the box.

The logic behind the false-belief task is that the only way to test whether children really understand the mind as separate from the world is to see whether they can demonstrate knowledge that people's actions are based on what they believe to be true rather than on what is actually true (e.g., Person A will search for her item in Location 1). Results from hundreds of studies indicate significant age-related changes between the ages of 2.5 and 5 years in pass rates on false-belief tasks, with most typically developing children passing false-belief measures between 4 and 5 years of age. These data have been interpreted as indicating a conceptual change in children's understanding of mind during the preschool years: They learn that people can believe and act on things that are not really true. Although the timing can vary by culture, there exists significant within- and between-cross-cultural regularity in this cognitive achievement.

Broader Topics in Theory of Mind

Although understanding false belief comprises a critical milestone in the development of mental state understanding, theory of mind encompasses intuitions about all aspects of the mind, including perception, intention, desire, emotion, belief, thinking, pretense, deception, problem solving, and consciousness. Although historically the field has focused on preschool cognition, researchers also actively explore insights about mental states during infancy, as well as how children's theory of mind continues to develop during middle childhood into adulthood.

Three- to five-month-olds show some appreciation that people's grasping behaviors reflect goal-directed actions toward objects; by 10 to 12 months, infants appear to parse people's actions in relation

to their underlying goals; and by the end of the first year, infants reference adults' emotional expressions to inform their exploratory decisions. Between 12 and 18 months, children imitate the intention of an action versus the exact behavior of an adult, they less often repeat actions that appear accidental versus purposeful, and they react differently to a person who is "unable" versus "unwilling" to help. Eighteen-month-olds reveal understanding that people can vary in their preferences; two-year-olds demonstrate awareness of the presence or absence of knowledge in others, and they prefer to learn from reliable versus unreliable informants. Although some studies purport to find evidence of understanding of false beliefs in preverbal infants on the basis of their looking patterns, debates exist as to how to interpret these findings, especially considering the poor performance of two- and three-year-olds on standard false-belief tasks.

Moving forward from the toddler years, most typically developing Western children develop knowledge about mental states in the same scaled progression between three and six years of age: diverse desires, diverse beliefs, false belief, and then real versus apparent emotion (i.e., that there can be a mismatch between internal feelings and outward expressions). During this same age period, children develop insights about the causal relations between different mental states; for example, that thoughts influence emotions and that emotions affect thinking. They also better understand that different people can interpret the same situation in multiple ways. Moreover, during early childhood, children gain a deeper appreciation of the relations between mind and morality—for example, that unintended rule breaking should be judged less harshly than intentional harm.

During middle to late childhood, children exhibit greater skill in introspecting on their own thoughts, they appreciate that thoughts can be difficult to control, and they develop knowledge about how mental strategies can be used for coping with negative situations. More generally, as they approach adolescence, children more carefully judge the evidence or reasons people have for holding their beliefs, the certainty or uncertainty of those beliefs, and how people's knowledge is shaped by perception, communication, and inference. Indeed, recent research indicates that the ability to reason about mental states in self and others and to interpret accurately the interpretations and emotions of others is not something "achieved" during early childhood but rather something that continues to develop across the lifespan.

Theory of Mind and Neuroscience

Advances in neuroscience have laid important groundwork for identifying a network of brain regions involved in attending to and reasoning about mental states: the medial prefrontal cortex, the ventrolateral prefrontal cortex, the dorsolateral prefrontal cortex, the right and left temporo-parietal junctions, the orbitofrontal cortex, the superior temporal sulcus, the precuneus, and the amygdala, with different types of theory of mind tasks (e.g., focusing on emotions, desires, intentions, beliefs) differentially recruiting different regions of this network. The majority of this research has been done with adults, although more recent studies using both fMRI (functional magnetic resonance imaging) and ERP (early receptor potential) have shown converging findings in children. Given that these areas are also recruited for other cognitive tasks—such as control of attention, empathy, and moral judgment—it is unlikely that these neural areas are exclusive for theory of mind.

Social Environment and Theory of Mind

Children construct knowledge about the mind through experiencing the world and communicating their emotions, beliefs, and thoughts about these life events to others. How parents and children talk about mental states, especially causes and consequences, predicts children's later ability to understand emotions and false belief, with preschoolers who are exposed to more frequent parent-child talk about mind and emotion demonstrating more sophisticated reasoning. Even mental state talk to preverbal infants significantly correlates with children's later theory of mind. Preschoolers with parents who frequently discipline via instruction, explanation, and talk about consequences also show advances in false-belief understanding compared with children less often exposed to these techniques. Additional variables shown to have significant relations to theory of mind in childhood include having siblings, especially older siblings.

Relations Between Theory of Mind and Other Cognitive Processes

One significant debate concerns the degree to which theory of mind relies on more domain-general cognitive abilities—in particular language and executive control. Components of executive control include the ability to control attention, monitor working memory, and inhibit responses. These cognitive

skills may help children reason about mental states, because to pass false-belief tasks, children must inhibit their own privileged knowledge about the object's true location. Language skills aid children's task comprehension as well as help them learn about the mental world through conversations with others. Converging evidence from multiple studies reveals that individual differences in executive control significantly correlate with performance on theory of mind tasks during the preschool years and that competency in executive control precedes false-belief understanding. Recent studies further show that executive control processes remain critical for utilizing theory of mind into adulthood.

Theory of Mind in Atypical Populations

Research on individual differences in theory of mind has identified four primary populations of children who exhibit deficits or extreme delays in socio-cognitive understanding: (1) children with autism, (2) late-signing deaf children, (3) children with congenital blindness, and (4) children who have been maltreated. Despite the different causal etiologies, these children share infancy and childhood years marked by difficulty establishing joint attention, low amounts of social referencing, problems attending to emotional cues, and infrequent causal-explanatory talk about mental states and emotions. These findings from atypical populations underscore the significance of early interpersonal connectedness and shared meaning for constructing knowledge about the mind. They further suggest that consistent exposure to contingent, predictable behaviors, where people's mental states are meaningfully aligned with behaviors, may be equally essential for developing a theory of mind.

Why Theory of Mind Matters

Most of this entry has centered on the development of theory of mind, rather than on how individual differences in theory of mind predict developmental outcomes. Although an extensive review of this research is beyond the scope of this present discussion, some key highlights will be mentioned by way of conclusion. The bottom line is that children's understanding of mental states and emotions matters. Children with more highly developed theory of mind have more positive interactions with peers and teachers, they are more willing to learn from others, and they demonstrate higher academic performance in preschool and elementary school than children with lower theory of mind abilities; these relations

hold even when controlling for verbal and cognitive skills. These connections are considered bidirectional in the sense that theory of mind likely is an entryway into forming positive relationships with others, but children continue to enrich their understanding of their own and others' minds through conversation, play, and negotiating conflicts.

Given the thousands of articles published each year on theory of mind, this field will continue to expand in the years to come, leading to further insight into the causes of developmental change, sources of variability, and strategies for improving theory of mind in at-risk populations. To accomplish this aim, the field needs to expand from an emphasis on infancy and early foundations to an examination of theory of mind across the lifespan.

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See also Conceptual Change; Knowledge, Analysis of; Metacognition

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TOLERATION

Both historically and conceptually, toleration remains one of the foundational characteristics that define the very essence of a diverse polity, and it is the basic virtue associated with a liberal conception of citizenship. Despite its centrality in the pantheon of liberal ideals, toleration remains a contested concept, an ambiguous principle, and an elusive virtue. In fact, there is hardly any concept in contemporary political philosophy that is more complex and controversial than that of toleration. At the same time, its educational significance continues to cause controversy in a number of areas, including citizenship education, sex education, multicultural education, and so on. In particular, the discussion over the status, justification, and limits of what is to be tolerated remains at the very center of discussion between advocates of toleration- and autonomy-based conceptions of citizenship education. This entry presents the foundational dimensions of toleration and delineates the internal dynamics of any act that claims to be an act of toleration. The concluding section of this entry brings to the forefront the various controversies over the genuine problems of toleration in a diverse polity and identifies some of the alternatives to toleration.

Foundations of Toleration

The history and development of toleration within the liberal tradition revolve around four foundational questions: (1) *why* toleration, (2) toleration of *what* (what is a legitimate object of toleration), (3) *how* to tolerate, and (4) what are the *limits* of toleration. Throughout the history of liberal political theory, a number of different and sometimes divergent arguments have been articulated to support toleration as a mechanism to grapple with the various forms of diversity that were the sources of conflict. Historically, toleration arose out of the doctrinal strife within the Catholic Church during the 16th and 17th centuries in Europe that radically transformed the prevailing forms of religious orthodoxy. The form of toleration that emerged out of the wars of religion, as Michael Walzer (1997) rightly points out, “is simply a resigned acceptance of difference for the sake of peace” (p. 10). Gradually, however, religious toleration was transformed from a pragmatic and prudential mechanism necessary for the security of peace and stability in an absolut-

ist monarchy (e.g., in medieval Europe) or empire (the Ottoman empire) into a principled commitment to the limits of the state and the reach of its institutional framework.

Conditions and Circumstances of Toleration

Each act claiming to be an act of toleration encompasses four foundational elements: (1) the *tolerating agent*, which exercises the capacity for toleration; (2) the *tolerated agent*, which is being tolerated by the tolerating agent; (3) the *object of toleration*, the source of disagreement between the two agents; and (4) the *justifying ground for toleration*, that is, the rationale—*why* the object of toleration is being tolerated.

Furthermore, any act that claims to be an act of toleration needs to be consistent with a set of background conditions that have been discussed in the literature (see McKinnon, 2006, chap. 1; Newey, 1999, chaps. 1 and 2):

1. Recognition of the disagreement over a particular belief, practice, or value that both the tolerating and the tolerated agent find important (*the importance condition*)
2. Rejection of the belief, practice, or value of the tolerated agent and its moral disapproval, that is, the existence of a doctrinal conflict between the beliefs and attitudes of the agents of toleration (*the disapproval condition*)
3. The possibility of changing the object of toleration, for example, a doctrinal (religious or ethical) belief, a value, or a particular practice carried out by the tolerated agent (*the malleability condition*)
4. Conditional acceptance of the source of disagreement between the two agents as a legitimate source of conflict (*the reasonableness condition*)

Each of the background conditions identified above is a necessary element of any act that claims to be an act of toleration. First, the importance condition basically refers to the moral cost the act of toleration has for the tolerating agent. Next, the disapproval condition depends on the evaluative judgment of the object of toleration by the tolerating agent, which results in the disapproval requiring that the tolerating agent reject the truth or rightness of the belief or attitude of the tolerated agent. Furthermore, the malleability condition

refers to the very nature of the object of toleration. On some interpretations, the object of toleration can only be a self-chosen rather than an ascriptive feature of individuals' identities.

Finally, the reasonableness condition of disapproval between the agents of toleration is primarily concerned with the justification of toleration. Both early and modern advocates of toleration have offered a number of different accounts of the justification of why a particular form of diversity should be tolerated—religious, prudential, sceptical, epistemic, political, justice based, and pluralist. For example, the account of toleration exemplified by John Locke in his *Letter Concerning Toleration* is characterized by two prevailing justifications for toleration: (1) the prudential argument and (2) the skeptical argument. The prudential justification for tolerating a belief rather than using force to change the believer's mind consists in the assertion that using force is not the right way of resolving a conscience-based dispute, since by forcing someone to change his religious *belief*, we do not get the conversion for the right purpose and the newly adopted position cannot qualify as a sincere belief. In contrast, the skeptical argument presupposes the necessity of toleration on the grounds that one does not know what the right way to salvation is.

The conditions and the circumstances of toleration identified above set limits to what qualifies as an act of toleration. In this respect, toleration is to be clearly delimited from—and should not be confused with—attitudes that might have similar practical effects but are not equivalent with it at the moral level, for example, displaying civility, indifference, or resignation. Yet, despite its centrality in the history of liberal political thought, a number of objections against the foundations, nature, and value of toleration have been advanced by a vast range of critics.

Moral and Conceptual Objections to Toleration

The alleged inadequacy of toleration has been advanced on two main grounds—there are (1) the moral objections to toleration and (2) the conceptual objections against toleration. The moral objections refer to a range of alleged shortcomings associated with the morally troubling *value* of toleration: for example, the notion that toleration is insufficiently inclusive in confronting claims associated with equal civic respect for diversity—it does not give equal weight to the different values, beliefs,

and conceptions of the good present in a diverse polity. Furthermore, two distinct puzzles associated with the morally troubling character of toleration need to be emphasized: (1) the process-based puzzle and (2) the goal-based puzzle. The process-based puzzle refers to the morally troubling nature of toleration—that, for example, toleration of different and competing values, beliefs, and conceptions of the good might contribute to social fragmentation and a reduced degree of civic unity among citizens. In contrast, the goal-based puzzle is primarily concerned with the outcome of toleration. On that view, toleration fails to develop in citizens the basic civic virtues that provide us with the “conditions of liberty,” including public responsibility to maintain the basic institutional framework of a diverse polity. Toleration would therefore turn out to be either *ineffective* or *unjust*.

On the other hand, the conceptual objections against toleration refer primarily to the puzzling *nature* of the toleration-based approach to diversity. For example, the egalitarian objection raises the criticism that the tolerating agent has the power to interfere with the disputed values, beliefs, or conceptions of the good whereas the tolerated agent does not. On this interpretation, toleration is a one-way relationship with asymmetry of power between the two parties, and it is therefore implicitly egalitarian as it does not presuppose some sort of equality between the two agents (Agent A and Agent B). At the same time, as Sanford Levinson (2003) emphasizes, toleration of diversity includes the expectancy that “exposure to diverse beliefs and ways of life over time will shift the tolerated’s view towards those of the tolerator” (pp. 91–92). On this interpretation, toleration would be inconsistent with the “liberal promise,” the commitment of not imposing one’s values on others. Moreover, some scholars argue that toleration is a residue of nondemocratic and illiberal social orders and is therefore inconsistent with the common principles and shared public values of a diverse polity.

But perhaps the most challenging of the conceptual objections to toleration is the paradoxical objection, which can be divided into two separate criticisms. First, the paradoxical nature of toleration refers to the temporary nature of toleration and is connected with the malleability condition of toleration. Once the tolerated agent accepts the belief, practice, or value of the tolerating agent, toleration is no longer necessary. Second, one of the strongest objections to toleration has been advanced by

scholars who are sympathetic to liberalism or come from liberal circles themselves (Scanlon, 2003, chap. 10). According to this criticism, the very status of toleration as a virtue is questioned since it is being depicted as negative in nature. On this interpretation, tolerating the values, beliefs, or conceptions of the good of the tolerated agent that one finds wrong or false cannot qualify as a virtue and is in itself paradoxical.

The Limits of Toleration

The moral and logical/conceptual objections to toleration open two separate dimensions of the limits of toleration that need to be emphasized here.

The Logical Dimension

The logical dimension of the limits of toleration delineates the conditions a particular act needs to fulfill in order to qualify as an act of toleration, as exemplified in the “Conditions and Circumstances” section of this entry. For example, the liberal and multicultural conceptions of the logical dimension of the limits of toleration differ primarily over what counts as a relevant object of toleration. As has already been emphasized, toleration traditionally dealt with religious and moral conflicts. In contrast, a multicultural conception of toleration can also be directed at the *identities* and not just the religious beliefs or other conscience-based commitments of individuals. The logical dimension of the limits of toleration is therefore linked to the status, as well as to the nature, of the object of toleration.

The Moral Dimension

Unlike the logical dimension explicated above, the moral dimension of the limits of toleration faces the problem of which differences should be tolerated and what are the principled bases delineating the limits of toleration. The moral dimension, then, focuses on the situation where the reasons for the rejection of certain beliefs, practices, or conceptions of the good are stronger than the reasons for their adoption. The moral dimension determines the limits of toleration and what is not to be tolerated. The classical liberal principle associated with the moral dimension of the limits of toleration is best represented by John Stuart Mill’s harm principle, introduced in *On Liberty*, published in 1859: Unless certain actions, practices, values, and beliefs or conceptions of the

good violate the basic rights and fundamental freedoms of others, they are to be tolerated.

Conclusion

Both the logical and the moral dimension of the limits of toleration raise the question of the alternative to toleration. In fact, over the past two decades, the inadequacy of toleration has been argued from this very perspective. Two interpretations of this inadequacy can be identified. On the one hand, according to those sympathetic to it, toleration is insufficiently inclusive and should be expanded (internal criticism). On the other hand, according to those who oppose it (external criticism), toleration should be replaced. These two positions generate two separate alternatives to toleration: (1) mutual respect and (2) recognition (Sardoč, 2010).

As the discussion of the complexity and the controversiality of the foundations, nature, and value of toleration shows, the status, the justification, and the limits of what is to be tolerated remain contested. As Walzer (1997) rightly emphasizes,

Toleration itself is often underestimated, as if it is the least we can do for our fellows, the most minimal of their entitlements. In fact, . . . even the most grudging forms and precarious arrangements [of toleration] are very good things, sufficiently rare in human history that they require not only practical but also theoretical appreciation. (p. xi)

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See also Citizenship and Civic Education; Liberalism; Locke, John; Mill, John Stuart; Multicultural Citizenship; Multiculturalism

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TOPOPHILIA (LOVE OF PLACE)

Love of place—*topophilia*—can be defined as “the affective bond between people and place or setting.” Although it is a notion that has a long pedigree in the Western philosophical tradition, it has been drawing renewed attention among educational theorists and curriculum developers, as will be outlined below.

Current scholarship in the area has devoted much of its attention toward defining “place” or “sense of place” and its presence, absence, significance, and positioning in our social, political, and ecological worlds (Gruenewald, 2003a, 2003b; Gruenewald & Smith, 2008). The result of this effort has seen the definition of place move from a concrete, situated locale to a more nuanced, complex system of relationships found within some loosely bounded area. Yet less attention has been paid to our subjective affectionate relations to place. As a result, to be successfully defined, *topophilia* requires a clear discussion and a subsequent coupling of its two root components: (1) a definition of *topos* (“place”) and (2) the particular relationship of humans (e.g., perceptual, emotional, experiential, and ethical) toward the said place, *philia*. At the end of this process, this entry will proffer the definition of “*topophilia*” as the pursuit and experience of a felt sense of being at home with the relational nexus that constitutes a place.

Topos: Place

There is no universally agreed-on definition of place given questions of time, history, culture, and the

diversity of the wild, urban, rural, human, and non-human entities and their interrelatedness that might constitute a place. There has long been an interest in the concept of place, going back at least to pre-Socratics. But the renewed and deepening interest in place and its implications for education in North America is a reaction to the placelessness brought on by increasing globalization and its propensity to uproot people and homogenize particular localities; to educational reforms favoring placeless curricula; and to the environmental crisis, which is strong evidence of a culture alienated and in conflict with the very places it needs for its survival.

The meaning of place has taken shape against these ailments of modernity and globalization. The phenomenological tradition—for example, the writings of Maurice Merleau-Ponty—has played a significant role in past decades to integrate humans back into their environments (Abram, 1996). Edward Casey champions the importance of place and the phenomenological approach and reminds us of its insight that human consciousness is an intentional consciousness, already situated and perceptually aware of the world. Thus, “to be at all is to be somewhere and to be somewhere is to be in some kind of place” (Casey, 1997, p. ix). As a result, if nothing is unplaced and human consciousness is always “conscious of,” then humans and places are inseparable. Jeff Malpas (1999) goes further, suggesting that place is not only phenomenological but ontological and is what makes human subjectivity possible. Places are the ground of Martin Heidegger’s being-in-the-world. As such, place can be thought of as a nexus of relations between spatiality and temporality, subjectivity and objectivity, and self and others. Place is a relational and performative nexus that humans *construct*, but it is a nexus that also *affects* and *makes* humans. Place then has both a natural and a cultural constitution; it is a kind of socio-natural hybrid.

David A. Gruenewald (2003b) offers four additional dimensions of place that contribute to its relational hybridity: ideological, sociological, political, and ecological. The sociological dimension acknowledges that places are in part sociocultural constructions. Landscapes and wilderness areas are filled with cultural history, symbols, and a colonial past. The ideological and political dimensions of a place imply that often humans make and are made by places produced by the force of ideas and power located within their material and spatial forms. But places are not exclusively cultural and social

constructions. They also are ecological—the nonhuman dimensions of a place have an efficacy independent of human subjectivity. All of these dimensions and their interrelations and intrarelations coalesce to become a definition of place. Now, topophilia is the subject’s particular felt sense and desire to come home to a place through attending to this nexus of relations. This requires cultivating reciprocity, familiarity, belonging, and care between and among the myriad unique dimensions and relations that together make up a place.

Topos has played an important role in current educational discussions, such as those on place-based, environmental, experiential, outdoor, and bio-regional education (Greenwood, 2008; Gruenewald, 2003a, 2003b; Smith, 2002; Stevenson, 2008). There is an active discussion that seeks to overcome the reliance on place in critical theory. And although topos as defined here relies on a critical theoretical approach to elucidate its dimensions, the addition made here with topophilia is an extension of what Gruenewald (2003a) calls “reinhabitation”: Not only does topophilia, like critical place-based pedagogies, recognize, admit, acknowledge, or address our situatedness within place, it impels us to reinhabit it (to inhabit our place with new awareness).

Philia: Love Of

According to David Macauley (2006), it was Aristotle who brought together the pre-Socratic elemental metaphysics of place and the felt sense or somatic notion of “grasping towards” (pp. 193–194). Aristotle draws a distinction between topos and *topos oikeos*, suggesting that first elements (earth, air, fire, and water) and later bodies have a whereabouts, a household (topos oikeos) that which they seek to find. Macauley claims this move from one’s present place to one’s natural place to be an act of domestication, “the movement of each body to its own place is motion to its own form” (p. 192). Aristotle contends that place is difficult to grasp but eventually is comprehended through elemental touch and bodily contact, an epistemology of the senses. Thus, for Aristotle, every body has a natural home to be sought, which is bounded and recognized through contact with adjacent bodies. The result is that the very nature of any thing is bound to its whereabouts. Elements seek a place, grasp at their home. Topophilia shares this metaphysical notion of a household for bodies, or topos oikeos. Much like the Socratic idea that philosophy is not

the love of wisdom per se but the love of its never-ending pursuit, philia in parallel regard to topos is also about seeking to overcome our alienation and placelessness. Philia endlessly drives the search for contact with a topos oikeos, in spite of the irresolvable paradox, the constant presence of placelessness like a snake at the core (Sartre, 1943/1992) of place, that makes the topophilia project ultimately impossible to fully achieve. A humanistic topophilia is analogous to Aristotle's elemental metaphysics of a topos oikeos.

Topophilia: Love of Place

In summary, topophilia is a sensory involvement with and a desired relation to the assemblage of human, socio-natural, and wild entities and their inter(intra) relatedness in a particular loosely bounded locale. It is a state of permanent becoming, a devotion to pursuing, encountering, and understanding the relations that which coalesce to make a felt sense of place without having a preexisting concept of place. It is a commitment to seeking the relations that make us feel that we belong within the world of places, yet it acknowledges that we are always haunted by the placelessness of the human condition.

Sean Blenkinsop

See also Cosmopolitanism; Experiential Learning; Globalization and World Society; Heidegger, Martin; Phenomenology

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TRANSFER OF LEARNING

Transfer—the successful use in a new context of intellectual, physical, or social skills, or items of knowledge, that were learned in a different context—has long been an important goal of instruction. Indeed, often it has been regarded of such paramount importance, as being so obvious a desideratum, and as being so readily achieved that it has been neither stated nor defended explicitly but has been simply assumed. This attractiveness of transfer, of course, is easy to explain: An education that does not equip students to deal with new problems or situations but that allows them only to be successful with ones identical to those met in the course of their instruction has little if any value as a preparation for living. Rarely if ever does one meet *precisely* the same problem situation again that was dealt with in the classroom.

The range of situations in which transfer has been held to occur—or expected to occur—is enormous. Plato was assuming that transfer would take place when the potential rulers of his Republic (the Guardians) received a lengthy education in mathematics and metaphysics; the ability to think abstractly in these disciplines would transfer and enable the Guardians to apprehend the abstract, transcendental realm of metaphysical reality that they needed to perceive in order to rule wisely. In the 19th century, J. H. (Cardinal) Newman (1852/1956)—appointed as rector of a new university in Ireland—made remarkable claims about the range of novel problem situations that could be dealt with by a person who had received a liberal university education, claims that assumed that transfer was unproblematic and wide-ranging:

It is the education which gives a man a clear conscious view of his own opinions and judgments, a truth in developing them, an eloquence in expressing them, and a force in urging them. It teaches him to see things as they are, to go right to the point, to disentangle a skein of thought, to detect what is sophistical, and to discard what is irrelevant. It prepares him to fill any post with credit, and to master any subject with facility. It shows him how to accommodate himself to others, how to throw himself into their state of mind, how to bring before them his own, how to influence them. (pp. 152–153)

In our own time, the argument is still often made that students who participate in team sports such as football acquire leadership skills, sportsmanship, the ability to act unselfishly as a team member, and so forth—all of which are transferable to other situations that these individuals will meet with in their lives as citizens off the sports field. (The scandals widely reported in the press involving the antisocial and sometimes criminal activities of sportsmen—especially professionals who have been engaged in their sport for extended periods—may be taken as informal evidence that makes the claims for transfer in this particular context somewhat dubious.) A final, vexing example will be sufficient to set the stage: In studies of some students who are doing poorly in school, it has been found that while—in their out-of-school lives—they are experts in tallying scores in 10-pin bowling (quite a complex arithmetical challenge), the skills that they obviously possess do not transfer back into their school mathematics classes, where they perform badly on tasks requiring these very same arithmetical procedures.

Transfer and Mental Discipline

The aspiration to achieve transfer, particularly in the cognitive/intellectual domain, has often been accompanied by belief in mental discipline—put crudely, the view that these abilities are rather like muscles whose functioning can be improved by exercise, the benefits of which will be evident in any new context in which that muscle is used. This view is relatively unproblematic when physical abilities and their transfer is the focus; baseball players, for example, do weight training, jog, and play golf during the off-season, and the physiological benefits of this regimen of exercise transfer over to their performance on the diamond in the new baseball season. Similarly, the physical

skills possessed by a gymnast will transfer over if he should take up high-trapeze work in a circus; perfecting his balance and exercising his biceps via weight training will no doubt be beneficial in both activities. It seems obvious that the closer in their key features the two domains of physical activity are, the more reasonable it is to expect transfer between them; a youngster who is deadly accurate at throwing stones might reasonably expect this skill to transfer over (at least to a degree) to the throwing of baseballs, but the skill would be of little use in swimming or in golf.

The more controversial issue, however, is whether exercising mental or intellectual abilities produces increased performance; that is, is there anything to be found in claims for mental discipline? (The exercise that, traditionally, was expected to be efficacious in strengthening the mental or cognitive abilities involved difficult, abstract, or formal material, and this regimen of training was called “formal discipline.”) Does, for example, training in advanced, abstract mathematics foster the ability to think abstractly in general, as Plato seems to have supposed? Does exercise or practice even increase the ability to think abstractly in other areas of mathematics itself? Does learning the formal, abstract, dry rules of classical Latin grammar foster the ability to concentrate on complex, dry material in general, as advocates for the teaching of Classics in schools used to argue? Does training the memory by learning the vocabulary of a dead language, learning poetry by heart, or memorizing the value of pi to 50 decimal places transfer over and increase one’s ability to memorize other material? And does exercise even strengthen the ability to memorize material in the domain in which the training occurs? Are, indeed, mental abilities similar to muscles?

This set of issues has been the subject of empirical investigation for more than a century, and the answer that has emerged is that transfer and improvement of an ability via exercise are both difficult but not quite impossible to achieve (although, as with physical skills, the closer the field of application is to the field of training, the more likely it is that some degree of transfer can occur—although the troubling case of 10-pin bowling scores must be borne in mind).

Empirical Studies

The psychologist, philosopher, and cofounder of pragmatism William James (1842–1910) became interested in the issue of whether memory could be improved by exercise, and he carried out the

following experiment (perhaps the earliest in this domain) on the learning of poetry, using himself as guinea pig. He selected a long piece (by Victor Hugo) and timed how long it took him to memorize the first half (158 lines). Next, he exercised his memory for 20 minutes a day for more than a month, learning passages from Milton by heart. Then, he tested himself to see how long it now took him, after this regimen, to memorize the second half of the Hugo piece. It had taken him 132 minutes to memorize the first chunk; the second half took him 151.5 minutes! By our contemporary research standards, this was not a tight piece of work, but nevertheless the results were suggestive. James's former student E. L. Thorndike, who became perhaps the leading empirically oriented educational psychologist around the turn of the 20th century, conducted an influential series of studies of transfer (centered on estimating magnitudes such as areas and lengths, where training had been given in an "allied function") and reached a similarly negative conclusion: "Studies of the influence of training . . . show a similar failure to bring large increases of efficiency in allied functions" (Thorndike & Woodworth, 1901, p. 395).

More recent studies have thrown some light on why transfer might be low, or not occur at all, between skills and knowledge that are the targets of learning in school and settings where these might be expected to be of use in the outside world—the differences between these two settings were often underestimated. (For example, if one looks past the actual arithmetical skills and focuses instead on the huge differences between the settings in which these are used, in the schoolroom and in the bowling alley, the difference in performance of some students in these diverse environments becomes more understandable.)

The words of a U.S. National Research Council (2000) report are apposite here:

Since transfer between tasks is a function of the similarity by transfer tasks and learning experiences, an important strategy for enhancing transfer from school to other settings may be to better understand the non-school environments in which students must function. (p. 73)

During the past three or four decades of the 20th century, and into the 21st, empirical studies by anthropologists, sociologists, and others have become more common, and these have revealed the important differences between school and non-school, real-life settings where knowledge and

cognitive skills are made use of. This tradition of work has shown that school settings place much more emphasis on individual work (outside settings are usually much more cooperative), they stress "mental work" as key in problem solving (as opposed to the use of physical tools and devices), and they emphasize abstract reasoning (rather than contextualized reasoning). Findings such as these have stimulated interest in educational programs that make school learning resemble much more closely the problem-based learning that occurs in real life (an idea that goes back at least as far as John Dewey's writings in the late 19th and early 20th centuries).

So where do things stand at the moment? With respect to improvement of memory, a better path to take than exercising it on dry, "formal" material is to make use of strategies for memorization. With respect to transfer of cognitive skills and information,

simply learning to perform procedures, and learning in a single context, does not promote flexible transfer. The transfer literature suggests that the most effective transfer may come from a balance of specific examples and general principles, not from either one alone. . . . Knowledge that is taught in only a single context is less likely to support flexible transfer than knowledge that is taught in multiple contexts. (National Research Council, 2000, pp. 77–78)

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See also Faculty Psychology and Mental Discipline; James, William; Learning, Theories of; Metacognition; Newman, John Henry (Cardinal); Plato

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U

UTILITARIANISM

Utilitarianism is the ethical doctrine that holds that right action consists in promoting the greatest overall or average happiness. It is a particular species of the broader genus of consequentialist ethical theory. Alongside Kantian ethics and virtue ethics, utilitarianism is one of three major ethical theories that continue to dominate contemporary Western philosophy. Usually these different ethical perspectives are understood as being founded on substantively different human values and to have divergent implications for moral judgment and practice. Nevertheless, some contemporary philosophers (e.g., R. M. Hare) claim that utilitarian ethics converges with Kantian principles of equal respect for persons, while others have developed consequentialist versions of virtue ethics. Nevertheless, this entry highlights those features of utilitarianism that distinguish it from alternative moral perspectives and points to some of its influence on educational policy debates.

Because utilitarianism fundamentally identifies the goodness or rightness of moral action with actual or expected consequences (happiness), it contrasts with Kantian ethical theories in that the intention or will of the agent is irrelevant to judging the rightness of her actions. Classical utilitarians defined happiness hedonistically, as pleasure. Contemporary utilitarians commonly employ the nonhedonistic idea of preference satisfaction (good outcomes are those in which more people get more of what they want, or, in some versions, what they would want if they were perfectly rational).

Regardless of how utility is defined, an important and distinctive feature of utilitarianism is that it often seems to lead to moral conclusions that conflict with “common sense” morality. While critics view this as a deficiency in utilitarianism (more on this later), proponents need not do so. Indeed, utilitarianism has been viewed by its proponents since the time of Jeremy Bentham as providing ethical foundations for social reform. Thus, 19th-century utilitarians such as Bentham and John Stuart Mill were early activists for causes like humane prison reform (Bentham), equal rights for women (both Bentham and Mill), abolitionism of slavery, children’s welfare, and the more humane treatment of animals (Bentham). Perhaps the most famous contemporary utilitarian theorist, Peter Singer, has been extremely influential as an advocate of the idea of animal rights and vegetarianism. So, in the hands of at least some of its most prominent advocates, utilitarianism is an anticonservative ethical doctrine.

Objections to Utilitarianism

Utilitarianism is a controversial ethical theory and has generated a wide range of criticisms, sometimes with catchy names—for example, that its conception of morality is too demanding, that it requires moral agents to think and act as if they were “utility monsters,” that it fails to acknowledge the ethical significance of special relationships such as friendships, and that it renders respect for individual rights vulnerable to majoritarian tyranny. Thus, for example, utilitarianism is sometimes held to commit individuals to moral judgments such as letting

one seriously ill person die to alleviate the modest discomfort suffered by a large number of people suffering debilitating back pain (we are supposed to imagine relevant constraints that might apply—such as scarce medical resources). In perhaps the most famous “thought experiment” in all of philosophy—the notorious “trolley example”—we are asked to imagine a train hurtling toward several rail workers who will definitely be killed if the train is not somehow stopped or diverted. In the example, a utilitarian moral agent is supposed to be committed to horrible actions such as pushing a large man off the bridge to stop the train—thus killing him in order to save the lives of several others (there are numerous variations on this gruesome scenario).

The focus in the philosophical literature on extreme and unrealistic examples such as the trolley case has provided utilitarians with some insulation from the underlying force of the criticisms they represent. Since no one can realistically expect to be faced with such choices in real life, some say, they can be dismissed as irrelevant to an assessment of utilitarianism’s status as a moral theory. However, objections to utilitarianism cannot be so easily dismissed. Indeed, the fundamental principle of maximizing happiness logically entails deeply inegalitarian (and thus for many, deeply unjust) consequences, although this implication of utilitarianism can easily be overlooked since utilitarianism is strongly egalitarian in at least one sense—it requires the welfare or happiness of each to be counted equally in determining the utilitarian best outcome.

Utilitarianism is inegalitarian, and potentially radically so, because it allows no appeal to principles or rules that would ensure that vulnerable individuals are protected against utility-maximizing outcomes that leave them very badly off. Indeed, according to utilitarianism, it is impermissible to adopt policies that ensure a decent level of welfare of each individual if there are feasible alternatives that promote more welfare. To illustrate, consider the issue of including children with disabilities in mainstream classrooms. Utilitarianism requires that in comparing the consequences of different alternative policies (e.g., inclusive schools vs. separate schools), the welfare of all—disabled and otherwise—must be counted equally as “inputs.” However, once we count up and aggregate the total welfare of everyone involved, the result may be that members of one or more groups are very badly off, while others are very well off (e.g., because disabled people and those who care most about them are a minority). If promoting

the greatest overall or average welfare is served by policies that segregate students with disabilities, or which deny them an education altogether, then utilitarianism requires that we do so.

The inegalitarian implications of utilitarianism are relevant to a critically reflective consideration of many contemporary educational policy questions—about what constitutes a fair distribution of school funding for students from unequal economic backgrounds, whether the state should fund religious schools, whether boys and girls be educated differently and/or separately, and so on. In each of these cases, utilitarianism requires that we evaluate the merits of educational policies according to their effects on overall or average happiness or welfare. While the actual outcomes of utilitarian reasoning about such cases cannot be determined without a careful consideration of the exigencies of particular situations and contexts, the fact remains that the “principle of utility” may, and sometimes does, require the adoption of inegalitarian policies or actions, which may offend against standing intuitions of fairness, decency, and humane treatment.

Influence on Education

Unsurprisingly, the inegalitarian dimension of utilitarianism has been especially prominent in educational debates. Perhaps the most influential application of utilitarian ideas in the educational arena has been through the incorporation of utilitarian ideas in human capital theory. Developed by economists, human capital approaches view education as a mechanism or tool for maximizing social utility through the development of individual economic productivity or “human capital.” On this view, the primary purpose of education is to equip students with skills that enable them to put their labor to more productive use. More productive workers earn higher incomes and contribute to a more productive economy. Economic growth increases overall happiness or welfare. Thus, for example, if those who live in poverty lack access to good quality education, then from a human capital perspective, the primary reason for expanding access to and quality of education is that doing so is an effective means of promoting economic prosperity for the nation as a whole.

Human capital conceptions of education subordinate those educational aims that focus on benefits to the individual being educated—for example, to promote individual growth, to foster critical reflection, and to enable people to lead more rewarding

and flourishing lives—to economic aims of education that emphasize the benefits that education provides to other people, such as “the country as a whole.” In this light, we can see how the human capital approach is vulnerable to another well-known objection to utilitarianism—often termed *the separateness of persons* objection.

This objection, initially developed by the philosopher John Rawls, begins from the claim that each individual person possesses ethical value in his or her own right; it matters ethically that each person’s happiness or welfare is his or her own and not merely considered in the aggregate. However, the human capital approach to education appears to violate this ethical principle by identifying the value of providing an education to an individual student with that student’s economic utility. In other words, the human capital approach recognizes the value of individual students only in the sense that each student represents an individual unit of utility within the aggregative process of calculating overall utility. Apart from this, the benefits that education may have for particular individuals are ethically irrelevant.

While human capital theory has heavily influenced economic thinking about education, and also educational policymaking, very few contemporary educational theorists have adopted an explicitly utilitarian stance in their thinking. One exception to this rule is the work of Robin Barrow (1975/2012), who defends a utilitarian theory of education that, he also argues, is attributable to Plato. According to Barrow, Plato’s conception of eudaimonia (flourishing or “happiness”) provides the criterion for rationally determining the proper function and place of individuals within the social order, such that an education that prepares people to occupy their respective social roles will ensure the happiness of each individual while also maximizing the happiness of the whole community. Clearly, such a eudaimonistic conception of utilitarian education differs significantly from the economically utilitarian educational views of human capital theorists, though no doubt objections to utilitarianism such as those outlined above (and others as well) will arise in different forms.

Conclusion

Ultimately, the reason utilitarianism has remained a persistently attractive ethical theory since the early 19th century is that it captures an important moral truth—namely, that the consequences of action for human welfare are fundamentally important and

should have an important place in any adequate ethical theory. A conception of morality that required us to obey “tried and true” rules without regard to consequences, or that pandered to existing “commonsense” intuitions about right and wrong without subjecting them to critical reflection in light of the harms and benefits imposed on people in particular circumstances, seems grievously deficient.

Nevertheless, deep concerns about utilitarianism, and its influence on education, also persist. No doubt, the aim of maximizing economic growth through education will sometimes benefit individuals, for example, by providing them with job skills to escape at least the worst forms of poverty. However, an education that subordinates all educational values to economic utility (or some other definition of utility) seems necessarily heedless of education’s particularistic (and potentially enormous) significance for individuals. Thus, critics maintain, utilitarianism can at best provide a partial and limited answer to problems of educational policy and practice; at worst, it may blind us to the most important and significant values to which education may be of service.

Kevin McDonough

See also Equality of Educational Opportunity; Human Capital Theory and Education; Kant, Immanuel; Mill, John Stuart; Plato; Rawls, John; Virtue Ethics

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UTOPIAS

Education is one of the most difficult tasks undertaken by a society. It becomes an even greater problem when it is not only devoted to the integration of children into the society but also is considered as a

means to construct a better society and to improve human nature—in the course of which moral and social values necessarily have to be questioned. For human beings not only transmit rules and skills, they also develop reflections concerning what is transmitted, what has to be transmitted—and why. We also reflect on the institutions in which transmittal occurs and the means that are adopted. In endeavors such as these, the aims or goals of education are a persistent question, as is the issue of means.

Sometimes broad educational projects such as these, aimed at reform of society or of human nature itself, are regarded as “utopian”—a negative label, implying a quest that is impossible, unrealistic, and dangerous. But there is a contrary and more positive usage, in which a utopia can point the way to renovation (if not salvation).

To understand the underlying meaning of such a word as *utopia* (and of the derived adjectives *utopian*, *utopism*, *utopist*), it is helpful at the outset to recall its origin.

About the Word *Utopia*

First, Utopia is the name created by Thomas More in 1516, of an imaginary island; and it is also the shortened title of the novel that describes the lovely and admirable organization of this happy place (the Latin title is *De optimo reipublicae statu deque nova insula Utopia libellus*, which means “Treatise on the Status of the Best Republic [or State] and on the New Island Utopia”). More created this name from the ancient Greek word *topos* (place), and the prefix “u,” which indicates a negation. So “utopia” (“u-topos”) is a “no-place,” a place that does not exist, a “nowhere”—a word that William Morris chose as a title for his novel *News From Nowhere* (1890–1891), and which Samuel Butler used for his—but in the reverse alphabetical order, *Erewhon* (1872). Thomas More himself said that the letter *u* can be pronounced *œ* and then refer to the Greek for “good”: Utopia can be defined as a happy and unreal place.

Second, “utopia” (with a small letter) became the generic name of all the novels built on the same scheme as that of Thomas More: They relate the discovery of an unknown and perfectly organized country that some lost travelers encounter by chance. In this group are *Civitas Solis* or *City of the Sun* (1623) by Tommaso Campanella, *The New Atlantis* (1627) by Francis Bacon, *Voyage en Icarie* (*Travels in Icaria*, 1840–1842) by Étienne Cabet, and some futuristic

novels in which the discovery of a happy city involves travel into the future, like *Looking Backward* (1888) by Edward Bellamy, or Morris’s and Butler’s novels. There are some discussions as to whether Plato’s *Republic* can retrospectively be named a “utopia”; some of its characteristics could confirm this retroactive use of the word, but many others invalidate it. Nevertheless, most of the authors of utopias are somehow inspired by the *Republic*, insofar as this text defines a perfect state. The same debate occurs about Rousseau’s classic educational treatise, *Emile*, which progressively becomes a novel painting the goodness of a natural and free education.

Third, the word *utopia* denotes an impossible dream of perfection, with a danger of illusion, which can give way to a nightmare; thus utopias can become very negative and depreciative in character. The utopia becomes a dystopia; a classic example would be found in Aldous Huxley’s 1932 novel *Brave New World*. As for Rousseau’s educational theories, they are sometimes criticized as embodying an impossible and dangerous method that keeps the child far from other children and far from books and knowledge, and so to those who read Rousseau, this way his novel depicts a dystopia.

Fourth, on the bright side, utopias can give rise to the dynamism of innovation. Karl Mannheim, in *Ideology and Utopia* (first German edition, 1929), says that the demise of utopia provokes a “static state of affairs” and that society needs utopia. Ernst Bloch, in his *Principle of Hope* (1954–1959) develops similar ideas when appealing to free socialism, different from Stalinism.

Fifth, utopia appears as a method of thinking, a sort of thought experiment. This point is developed by Raymond Ruyer in *L’Utopie et les utopies* (1950). He compares utopia with the first stage of scientific constructions of models. If *Emile* can be related to utopia, it could be from this very point of view: Rousseau builds some pedagogical situations, which become imaginary experiments.

The story of utopia is not, however, only a story that dwells in books or in the world of ideas. In centuries past, and up to the 1960s and beyond, groups of individuals have tried to build utopias—which is quite ironic, since the very essence of utopia is to remain a dream. However, the attempts at making utopia a reality are quite numerous. Some authors of the 19th century, like Charles Fourier and Henri de Saint-Simon, were called *utopists* because they tried to imagine new societies that could actually be established. A number of attempts to found utopias

took place in the United States, in Brazil, in Mexico, in Algeria, and in France. Others were inspired by Cabet's *Icaria* or by Bellamy's *Looking Backward*. One original and contemporary utopia, Auroville, in southeast India, was created 40 years ago and still exists. Insofar as education is concerned, a host of utopian experiments were stimulated in the 20th century by B. F. Skinner's novel *Walden Two* (1948). Most "achieved utopias," however, were failures or semifailures.

Whatever its meaning might be—a fictitious story, a dream (or a nightmare), a project, a method of thinking, an experience—a utopia deals in some fashion with education and can shed light on its processes and its contributions to society, illuminating the value and functions of knowledge in education; the causes and effects of inequalities and exclusion in education; and, if there is such a thing as a "perfect education," in what it consists.

The Value of Knowledge in Utopias

One of the problems an educator is confronted with is how to instill in a child the desire for knowledge. When Aristotle says that "all men, by nature, desire to know" (*Metaphysics*, A, Book 1, sec. 980a), he does not mean that this desire is spontaneous—a psychological interpretation of this famous sentence would be irrelevant. Aristotle defines humankind by the *potentiality* of acquiring knowledge, a potentiality that can be delayed by many obstacles, for example, the pupils' indifference and passive refusal to master new knowledge.

In utopian novels, in which perfection is supposed to be attained, learning is described as a pleasure. Utopian writers have (or suppose that they have) deep insight into what is wrong in the real world, and thus they build an inverse world of harmony and ease. But the differences in their conceptions of what perfection consists in lead them to offer diverse prognostications about education.

Generally, knowledge is celebrated in utopias. Thomas More's citizens have made many discoveries without any outside influence, which suggests that knowledge, or truth, can gain recognition as such in their society. So the Utopians attend lectures every morning, before working, and attain a high level of knowledge that is far removed from mundane usefulness in the vital tasks of the day.

In the anonymous utopia, the *Royaume d'Antagil* (1616), the effort is focused on the architectural organization of the Academy and the associated

services: temples, libraries, amphitheaters, and even a sewage system. Some spaces for physical exercises are provided for maintaining the students' health.

The *Civitas Solis* of Campanella provides seven concentric circular walls around the town, with drawings on them, so that children constantly see what is worth learning: mathematics, human traditions, minerals, plants, animals, technology, sciences, religions and so on, all these being presented in a symbolic form and not in a rational or evolutionary/developmental order.

Francis Bacon's *New Atlantis* presents the picture of unfinished, evolving knowledge: A group of researchers are working in an Academy to increase knowledge in a variety of fields: mathematics, botany and medicine, physics, astronomy, human capacities, and so on. He invents new experiments and *artifacts*, which make the *New Atlantis* resemble, in some aspects, later science fiction novels: New plants and new animals are created; the climate is supposed to be mastered; and new sources of energy are implemented. In his utopia, Bacon expresses the faith in science that he already developed in two theoretical and earlier texts—*Novum Organum* (1620) and *The Proficiency and Advancement of Learning* (1605). *Novum Organum* establishes how nature can be controlled by knowing and obeying its laws, while *Proficiency* gives some evidence of the benefits of knowledge provided that its limits are born in mind (and so researchers have to implore God to preserve them from the bad use of science).

In Étienne Cabet's *Icaria*, knowledge is a good that children spontaneously demand. Parents and teachers need some training to deliver it correctly. The state takes responsibility for this training because in *Icaria* the most important public duty is to create the most perfect and happiest children possible. All their life is organized and calculated in relation with learning, even within the family circle in the evening, and even when playing. Pedagogical methods have been scientifically improved, useless difficulties have been cut out (e.g., in reading and writing, the spelling system has been reformed); laziness has disappeared (and if not, the cure consists in patiently pampering the poor child who needs help to fight the injustice of nature).

These examples emphasize that utopias have a very high regard for teaching and knowledge. In Morris's *Nowhere*, the narrator, after being accidentally thrown into the 20th century, and wanting some information about children's way of learning, is astonished when hearing that even the word

“school” is unknown, although children seem very clever and happy. In this peaceful world, education is so natural, so refined, that schools are no longer useful. In a somewhat similar vein, in 1970, Ivan Illich actually developed, as a project, the idea of *deschooling society*. His ideas had some impact on those who saw and criticized the defects of school and traditional education (the “banking” approach to education, Illich called it). In this line of utopian work, the links between education and politics is highlighted—the desire to change society merges with the desire to change education.

The Function and Finality of Knowledge

Across the range of utopian authors, however, different points of view appear. For Thomas More, having knowledge is a pleasure in itself; he does not value knowledge for its utilitarian advantages. In *Antagil*, on the contrary, the perfect architecture of the Academy is available to the higher class of the town but not to others; in Campanella’s *City*, the most learned citizen is the leader, and he is called “Sun” because he lightens all his companions with his wisdom (here, therefore, being learned is identified with being wise); in Bacon’s *New Atlantis*, knowledge and wisdom are not systematically linked.

This variety emphasizes the difficulty in reaching agreement about the nature of perfection, and about how to attain it, and clearly, utopias have contradictory views about the role to be played by acquisition of knowledge in this quest. In this respect, utopias cannot be considered as models, but as stimuli for reflection.

However, it is also clear that the prospects for education are dismal if it is conceived solely in terms of its usefulness for material and social life. Immanuel Kant himself underscored this when he said, in his *Reflection on Education* (1803), that education must be preserved from drifting in two directions, the one induced by parents who wish only social success for their children and the other ordered by the Prince who regards his subjects as being tools for his designs. In other words, education and knowledge have to be seen as leading to a fulfilling life, with liberty and dignity.

Nevertheless, in reality, social and material constraints can conflict with the pure pleasure of learning and the pure fulfillment of individuals. Utopian authors often are aware of this problem and resolve it by pointing to the (supposed) spontaneous harmony between individual desire and social needs (as

does Thomas More), by the (supposed) wisdom of the leader (as does Campanella), by accepting some inequalities (as do both Campanella and the author of *Antagil*), or by supposing that the citizens are rational and thus are able to share harmoniously all the necessary tasks in society (as does Cabet). As for the Skinnerian education in *Walden Two*, liberty is very highly valued, and citizens are free to do what they like—but within the bounds set by the regimens of negative and positive reinforcements that effectively shape their behaviors so that the society functions smoothly. (But who, it is fair to ask, is designing these schedules of reinforcement?)

The Causes and Effects of Inequalities and Exclusion

To preserve internal harmony, utopias propose various solutions, but the defects one can discover in these solutions reveal the near impossibility of attaining a truly perfect society—even in imagination.

In Thomas More’s book, although every Utopian is supposed to love learning, some Utopians do not appreciate education and culture as much as others do. This difference leads to a certain inequality—for although doing intellectual and material work are declared to be equal undertakings, in effect, the former is more highly valued. Manual workers can be “raised” to intellectual activities, but if they are not effective here, they are “reduced” again to material tasks. A similar principle applies in Campanella’s *City*: Although equality between town and country is proclaimed, less gifted children are sent to the country, and if they are successful there, they are called back to town.

These examples underline one of the most difficult problems in the real world, which, in fact, is also present in utopias: How can we manage differences between human beings? Utopians have been aware that “difference” and “inequality” should not, as a matter of course, be treated as if they were the same. Jean-Jacques Rousseau, in his *Discourse on the Origin of Inequalities* (1755), subtly analyzed the concepts of *natural inequalities* and *moral or political inequalities*, and he established that “natural inequalities” (or “differences”) can become inequalities according to the values of a given society. In utopias, several cases occur: Differences can remain qualitative but they do not lead to inequalities (i.e., more or less what More tries to depict in his novel, although some hierarchy does reappear); but if differences are immediately interpreted as inequalities,

they can be eradicated (i.e., what Cabet says he does, by helping the less gifted children), or else they can be justified and considered as a good—for example, by arguing that it is good for everyone to be in his or her right place (as Campanella does and, on some interpretations, Plato as well). Nonetheless, in each case, some drawbacks arise; even in utopia, perfection has its price.

Most of the time, utopias are envisioned as located on islands or in isolated places to preserve them from outside influences; Rousseau adopted a variant of this device, setting his *Emile* in a large, private country estate, virtually cut-off from outside civilization. The point is, in utopias the outside world is seen as threatening. Foreigners are considered as a danger. That is why these peaceful cities generally prepare for war, although they hope not to conduct warfare. In More's *Utopia*, war is waged by mercenaries, while in Campanella's *City of the Sun*, all the citizens can be assigned to it, and children are trained to endure the sight of blood by going hunting with their parents. The citizens of More's utopia might seem less cruel because they employ mercenaries, and they are not even allowed to be butchers themselves—rather, the cutting up of the meat is done by slaves, and the death of mercenaries is considered unimportant.

In fact, in many utopian novels, difficulties are shrugged off rather than solved, but an unsolved difficulty is a flaw in perfection. A case of an unresolved difficulty is when the utopia is built on contempt for, or the attempted exclusion of or insulation from, what is different. In contrast, differences are embraced in Charles Fourier's works. For him, differences between human beings are the expression of all sorts of passions. None of them is really bad, he said. They become bad because, in our "civilized" society, they serve no function. *Civilized society* is a simple, very imperfect, condition in which people cannot help considering some passions as vices and condemn them by inventing "morality." In the next step of society's development, which he calls "Harmony," the idea of vice will no longer be relevant. The aim of Harmony is not to create a perfect being, but to put the individual's imperfections to use. For instance, young children are often attracted by dirty things, so the best thing to do is to make use of this attraction—young children will be employed in cleaning grubby materials! Fourier considers that two thirds of little boys and one third of little girls like dirty things; he thus imagines making some groups, that he calls "little hordes," with

this occupation. The other boys and girls, those who prefer delicacy, calm, and refinement, will be organized in "little bands." In this conception, there are no gendered types, but a statistical partition, which allows girls to be rude and remain feminine, and boys to be delicate, and remain masculine.

But Fourier imagines his ideal, the "phalanstery," with such a precise proportion and number of people that it is very artificial, even though he offers his ideas as the way to prepare a real society.

Differences remain difficult to manage, even in the imaginary thought of utopias. To reconcile the respect of particularities with the aspiration to the universal is not only difficult to achieve, but it is also difficult to conceive. What we can consider as a failure of utopias illustrates the inadequacy of a solution based only on organization. But the question of differences is not only a question of rational organization—it is a question of ethics.

The Dream of a Perfectly Successful Education

It is clear that there is a gap between utopias and reality, but nevertheless, utopias are seductive. With their fantasies, utopias raise questions about things that may have seemed self-evident, and by doing so, they compel us to justify our choices or to question them. Utopias are paradoxical: Their asserted perfection is attractive, but it is also disquieting, and on reflection their flaws become apparent, causing them to become less fascinating. In his *Lectures on Ideology and Utopia*, delivered in Chicago in 1975, the French philosopher Paul Ricoeur underlined an ambiguity in utopias: On the one hand, they are fictitious, and they depict the impossible; and on the other hand, they make people believe that they can be achieved. There is something ironic in the relation between utopia and reality.

Utopia and reality are opposed in the way they manage action and success. A utopia organizes and establishes programs and is supposed to depict the good way. In real situations, programs are established to change the way a society functions, but we are not able to foresee what will happen. This weakness is also a strength, and we can say with Hamlet, "There are more things in heaven and earth / Than are dreamt of in your philosophy" (Shakespeare, *Hamlet*, Act 1, Scene 5). Incompleteness has more future than culmination.

In the real world, education is a sort of accompaniment along an endless path to maturity; in utopias, the route is programmed. But is there

real education in utopia? To achieve an education would mean to obtain the forecasted result. Such a success would be a sort of confinement: In fact, to achieve an education project would amount to stealing a part of liberty and responsibility from one's own formation; it would cut out the possibility of revolt. Paradoxically, a successful education scheme could boil down to accepting a partial failure of the project of seeking a perfect education. Another factor playing havoc with preconceived educational plans is that neither parents nor teachers are the only educators—life itself, experience, and chance encounters, play a great and unpredictable role.

Thus, a failure in education can be assumed, even though it is not wished for. Utopia as a method of thinking maintains the dream of perfection; it remains imaginary but can work as a regulating tool to control desires and initiatives. At the same time, it must avoid the illusion of a possible concrete instantiation. Utopia is like a seductress who cannot be touched without burning everything around her. But thanks to utopia, we can learn how to come to terms with the belief of a possible perfection and, at

the same time, how to contain it within the horizon of our hopes.

Anne-Marie Drouin-Hans

See also Bacon, Francis; Behaviorism; *Deschooling Society*; Ivan Illich; Kant, Immanuel; Plato; Rousseau, Jean-Jacques

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V

VALIDITY, TYPES OF

The meaning of validity has changed often over the past century (see Kane, 2001). Originally, it was related to whether a test measured what it purported to measure, but in the mid-1950s, the usage of the concept became more complex as different types of validity were identified. Thus, it came to refer to face, content, criterion, and concurrent validity. (Face validity refers to how well the test appears, “on its face,” to measure what it is claimed to measure. Content validity refers to how well the test instrument covers or samples from all aspects or content of the entity or domain it is attempting to measure—for example, to what degree does a test of mastery of a science curriculum adequately sample from all the content covered in that course. Criterion and concurrent validity are closely related and can be thought of as referring to how well the test correlates with a measure of the criterion taken at the same time and which has already been validated—for example, how well does a new way of measuring IQ [intelligence quotient] produce results that highly correlate with the standard measure of IQ.) Validity was also distinguished from reliability, which is the degree to which the test produces the same result on subsequent administrations (therefore, a test that is not valid can nevertheless be reliable). This entry focuses on the developments that subsequently have taken place with regard to the conception of validity and on the implications for users of tests.

These conceptions of validity relied heavily on providing evidence for the quality of the items used in the test, the scores, the scoring, and the test structure. Over the past half-century, however, an important change in emphasis has gradually occurred—discussions of validity became more concerned with the quality of a test score as a basis for making defensible interpretations. That is, the great shift has been from providing evidence of *validity about the test* to providing validity evidence about the way the results from the test are *used*—in short, the focus now is on the validity of the *interpretations or inferences from the test*. As pioneers in this area, Cronbach and Meehl put it, as long ago as 1955, “One does not validate a test, but only a principle for making inferences” (p. 297). Messick (1989) has been most forceful in providing a unified approach to the notion of validity. He claimed,

Validity is an integrated evaluative judgment of the degree to which empirical evidence and theoretical rationales support the “adequacy” and “appropriateness” of “inferences” and “actions” based on test scores or other modes of assessment. . . . Hence what is to be validated is not the test or observation device as such but the inferences derived from test scores or other indicators—inferences about score meaning or interpretation and about the implications for action that the interpretation entails. (p. 13)

An important implication of the view of validity expounded by Messick is that it is vital that

evidence is provided about how users make inferences and take actions on the basis of test scores, and it also highlights the importance of determining whether the test and report developer can provide evidence for the adequacy and appropriateness of these interpretations. It should be clear that validity is not a “yes” or “no” matter; rather, it can be assessed via the degree to which the accumulated evidence supports a particular test use or interpretation. No one form of evidence can suffice; instead, the evidence needs to be multiple and aimed at defending the quality of the interpretations made on the basis of the test score (see Cronbach, 1988). The key, however, is that professional judgment is required to determine the forms of evidence that are most appropriate in a given situation and to judge the adequacy of the support for the intended purpose. In some cases, more rigor may be needed, such as when high-stakes decisions are being made.

Given the emphasis on conceptualizing validity as involving an argument, Crooks, Kane, and Cohen (1996) outlined a set of threats to each of eight linked stages of inferences and assumptions underlying performances on tests and interpretations of test scores. These stages (and the associated threats) are as follows:

1. Administration of assessment tasks to students (low motivation, anxiety, inappropriate assessment conditions)
2. Scoring of the performances on tasks (undue emphasis on some criteria, low interrater or intrarater consistency)
3. Aggregation of scores on individual tasks to produce combined scores (tasks too diverse, inappropriate weighting, overrepresentation of the domain)
4. Generalization from the particular tasks included in a combined score to the whole domain of similar tasks (conditions of assessment too variable, inconsistency of scoring criteria for different tasks)
5. Extrapolation from the assessed domain to a target domain containing all tasks relevant to the proposed interpretation (conditions of assessment too constrained, underrepresentation of domain)
6. Evaluation of the student's performance to form judgments (inadequately supported construct interpretation, biased explanation)
7. Decision on actions to be taken in light of the judgments (inappropriate standards, poor action decisions)
8. Impact on the student and other participants arising from the assessment processes, interpretations, and decisions (positive consequences not achieved, serious negative impact)

Crooks et al. (1996) noted the importance of all links in their chain for constructing an argument about the uses of a test score; and they pointed out that the strength of a chain of argument depends on its weakest link, although they suggest that Wittgenstein's (1953) claim should be borne in mind here: “The strength of the chain lies not in one fibre running throughout the entire length, but in the overlapping of many fibres” (Part I, No. 67). The nature of the decision to be made would determine where more attention should be given, and they concluded usefully by claiming that “examining each link and looking for weaknesses in the chain of inference, including those arising from common specific threats, provides a systematic approach to validation” (Crooks et al., 1996, p. 284).

With the advent of the Internet, a plethora of test reports are available, and they are becoming fancier and sometimes much more detailed; often, the information provided convinces all but the psychometrically sophisticated reader. More research is needed on the quality and nature of evidence needed to defend these more accessible reports. For example, Hattie (2010) derived seven major principles involved in the development of defensible reports based on human–computer interface research, graphics design, and visual interpretation:

1. Readers need a guarantee that they will be able to satisfactorily navigate the report.
2. Each report needs to have a major theme (anchored in the task domain, and maximizing interpretations and minimizing the use of numbers).
3. Reports should minimize scrolling, be uncluttered, and maximize the “seen” over the “read” (as these can introduce unneeded interpretation biases).
4. Reports should provide justification of the test for the specific applied purpose and interpretations.
5. Reports should include the meaning and constraints of any interpretation.
6. Reports should be timely to the decisions being made.

7. Reports need to be conceived as leading to actions and not merely as information to be copied, cited, or stored.

This topic of optimal test report design is still in its infancy, and much more attention is needed on how to devise reports to maximize users correctly interpreting them and making the correct inferences and actions from the reports. More analysis of how users interpret reports, make inferences, and make “where-to-next” decisions is needed, especially using cognitive analyses and think-aloud methods.

Bennett (2010) has added an additional demand, by challenging test developers to outline and defend their “theory of action” or program logic—providing evidence not only on the intended and unintended consequences of any testing program but also on the causal paths between the tests being developed and the outcomes desired. For example, for school-based assessment, there needs to be a theory of action relating to the students who are measured by the tests that guides the selection of the next level of instruction in light of the interpretation of test scores and ensures that strengths and gaps or weaknesses are addressed, that achievement and follow-up claims have similar meaning across population groups, that instruction is indeed adjusted by empirical evidence, and that the quality of inferences suggested and adjustments made are similar across population groups. These claims, in many ways, are reversing the trend toward asking for validity claims based on evidence of the interpretations and moving back to asking for evidence about “how the test works” (Borsboom, Cramer, Keivit, Scholten, & Franic, 2009; Borsboom, Mellenbergh, & van Heerden, 2004).

There are many forms of evidence relating to the validity of tests—their use, their fidelity, their interpretations, and their limitations. The choice and sufficiency of this evidence are very much a function of the proposed interpretations and use. The test developer, the person who chooses the test to be administered, the test interpreter, and perhaps even the individuals who are taking the test need to seek and consider the preponderance of evidence that lends support to any interpretations or decisions based on the information in the test. If much of this evidence for validity in the use of the test is provided by the developer, there is a greater probability that users and interpreters will make defensible interpretations, understand the limitations and strengths of the test relating to the interpretations, and provide alternative plausible hypotheses or interpretations of

test scores that may challenge the user and interpreters as they make informed decisions about the quality of the interpretations.

John Hattie

See also Abilities, Measurement of; Experimental and Quasi-Experimental Designs for Research: Campbell and Stanley; High-Stakes Testing

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VALUE-FREE IDEAL FOR RESEARCH: CONTROVERSIES

The value-free ideal has a long and complicated history. It begins with social science’s infancy, especially the early work of Max Weber and debate over

value-free (*Wertfreiheit*) social science. And it continues through logical empiricism, the revolutionary vision of Thomas S. Kuhn, and contemporary philosophical debate over the nature and ambitions of modern science. Woven throughout this history are questions about the nature and limits of scientific objectivity and the aims of scientific inquiry. The various positions that have emerged about the possibility of value-free research especially in the social and human sciences have been reflected in the lively debates concerning the nature of educational research that have been taking place for approximately a century; sometimes these debates have occurred in the context of discussions of educational research methodology—for example, the strong (and international) push at the end of the 20th century for the use of true experimental research designs (the “gold standard”) was often seen by critics as a short-sighted, quixotic, and positivistic quest for objective, value-free results on which educational policy could be based (see Phillips, 2006). This entry selectively reviews several important milestones in these various debates, tracking key developments in response to these questions; the educational literature will not be the focus in what follows, as the debates there were largely derivative.

One of the earliest discussions of value judgments in social science began with the publication of Weber’s “‘Objectivity’ in Social Science and Social Policy” in 1904. Weber (1949) had just assumed the coeditorship of a preeminent social science publication, and he wanted to establish standards to guide “an exclusively scientific journal” that also sought “the education of judgment about practical social problems” (p. 50). At the time, many social scientists believed that social research, especially the study of economic theory, should not be divorced from value judgments about political ends. Weber believed that some social scientists went too far, conflating “what was normatively right . . . with the immutably existent.” Weber rejected the view that economics was, at root, an ethical science that could “provide binding norms and ideals from which directives for immediate practical activity can be derived” (p. 52).

Nevertheless, Weber believed that value judgments could, in fact, be studied by social scientists when the analysis took the form of technical criticism. In many respects, Weber’s (1949) position in “objectivity” fits the logical empiricist mold—he described science as striving for an analytic ordering of empirical reality and maintained that “empirical science cannot tell anyone what he *should* do—but

rather what he *can* do” (p. 54). At the same time, Weber believed that social science was value relevant (*Wertbeziehung*) for two reasons. First, the delineation of objects and problems in the social sciences must be guided by cultural values. Empirical investigation that does not reflect or explain the problems and experiences of people—problems and experiences shaped by cultural values—misses the social aspect of social science. Second, the interpretation of social phenomena requires the attribution of intentional states to people. Because social scientists cannot directly observe these states, the best recourse is to draw on their own subjective experiences to fill the interpretive gap.

Despite these value-relevant demands, Weber ultimately concluded that scientific objectivity and value freedom in the social sciences could be maintained by appealing to the larger interests of science and the professional character of scientists. Researchers have a scientific duty to search for factual truths as well as a practical one to stand up for these ideals. For Weber, the careful execution of these professional duties is what constituted value-free social scientific inquiry.

In the 1940s and 1950s, the ascendancy of logical empiricism (also known as logical positivism) in the United States, and the conclusion of World War II, brought new interest in scientific methodology and the role of science in reshaping society. These concerns naturally led to questions about the role of values in scientific inquiry. Some logical empiricists, like A. J. Ayer (1954), held to a strict distinction between statements of fact, which could be verified with empirical observations, and statements of value, which could not. While Ayer’s work went on to inspire behavioral scientists like B. F. Skinner, it also seemed to imply that values, much like mental processes, were not susceptible to empirical inquiry and should therefore be ruled entirely outside the domain of science.

Other logical empiricists like Ernest Nagel offered more nuanced views of values in social science. Much like Weber, Nagel (1979) distinguished between different kinds or modes of value judgment. Sometimes researchers make value judgments in their estimation of the extent to which a particular fact is accurately described by a particular judgment. These “characterizing” value judgments assess the empirical evidence for or against particular conclusions but do not imply approval or disapproval. For example, a biologist might judge that a particular animal is anemic on the basis of the available

evidence. In contrast, “appraising” value judgments signal approval or disapproval as to a particular state. In the prior example, an appraisal would attach approval or disapproval to the specimen’s anemic state (p. 492). Appraising judgments can also have a role in science—for example, in determining acceptable risks in medical research and balancing type I versus type II statistical errors.

Nagel’s two types of value judgment resemble Karl Popper’s distinction between purely scientific (sometimes called intrascientific) and “extrascientific” values. The former include values like truth, relevance, and simplicity—values that contribute to the scientific search for truth through rational criticism and the gathering of unbiased empirical evidence. The latter include all other values, including religious, moral, and cultural values. Like Nagel, Popper believed that such extrascientific values were integral to being a practicing scientist and not just in setting the parameters of scientific inquiry. To expect a social scientist to “suppress or destroy his value judgments,” he wrote, would result in “destroying him as a human being and as a scientist.” It is, in short, “impossible to separate scientific work from extrascientific applications and evaluations” (Popper, 1976, p. 97).

However, Popper (1976) was also quite clear that “it is one of the tasks of scientific criticism and scientific discussion to fight against the confusion of value-spheres” (p. 97). The reconciliation of the value-laden scientist with the pursuit of truth devoid of such values raises another important contribution to the debate over value-free social science. For Popper, scientific objectivity resided less in the character or virtue of the individual scientist than in the character of a scientific community and its norm of openness to criticism. This allowed Popper to maintain, without contradiction, the humanity of individual scientists—with their biases, interests, and extrascientific values—and, at the same time, hold up scientific inquiry as a place where these outside values do not influence the internal working of science and where scientists hold one another accountable and ultimately learn from their mistakes via the mechanism of openness to criticism and scrutiny (p. 99).

The social dimensions of science touched on in Popper’s work began to receive sustained attention after the 1962 publication of Thomas S. Kuhn’s book, *The Structure of Scientific Revolutions*—a work that has been vastly influential in the field of education (Phillips, 1987, chap. 8). Kuhn led a

generation of sociologists and philosophers to examine many of the nonevidentiary community factors involved in the production of scientific knowledge. This also opened up the possibility that so-called extrascientific values might actually shape the ways in which science advances and truth gets understood.

While the logical empiricists understood science as a process of gradual accumulation of more and better warranted theories and facts, Kuhn posited a radically different vision of scientific progress—one punctuated by periods of normal and revolutionary science. During normal science, a scientific community works within a shared paradigm or framework, where the community shares a set of puzzles, parameters for possible solutions, and favored methodologies. During revolutionary science, puzzles or anomalies arise that are particularly worrying and that highlight more fundamental disagreements. In *Structure*, Kuhn suggested that a scientist’s movement from one paradigm to another was akin to a religious conversion (because the paradigms were “incommensurable”); but, notoriously, his metaphor strongly suggested irrational progression. Later writings by Kuhn suggest a reworking of this position that allows a more rational comparison of competing paradigms.

More recently, Helen Longino (2002) has developed an epistemology that she calls contextual empiricism that offers an account of the role of non-cognitive factors in scientific progress. Whereas Kuhn was concerned with explaining the progression of science, Longino focuses on the relationship between science’s aspirations and its epistemological foundations. She builds her epistemological framework around a central problem in philosophy of science: the underdetermination of theory by evidence (the available evidence is always compatible with a large number of theories or hypotheses). Relatedly, for a researcher to test a hypothesis, it is not enough to have a well-formulated hypothesis and a set of observations. A host of background assumptions are also required. If the observations fail to conform to the hypothesis, was it the hypothesis, the observations, or the background assumptions that were wrong?

Longino (2002) moves from these observations to the radical conclusion that all knowledge is necessarily partial. While “purely logical constraints cannot compel” acceptance of a particular hypothesis or theory, inquirers are situated within a “network of relationships—among other individuals, social systems, natural objects, and natural processes” that can serve as a resource for closing the gap left

by logic (p. 127). Thus, a claim or theory can be warranted or epistemically acceptable but also contingent on the background assumptions shared by the community of inquirers. Contextual empiricism thus avoids privileging some untested or uncriticized background assumptions over others. Knowledge is localized in the sense that it only makes sense against an implicit set of background assumptions.

Contextual empiricism requires a humbling of the aspirations of science. Values in the form of background assumptions and beliefs can actually play a critical role in promoting the development of knowledge. At the same time, knowledge is only as good as the shared aims, the standards of evidence, and the diversity of background assumptions held by the community of inquirers. On this point, Longino's account presents an interesting epistemological argument for having inquirers with a diversity of background assumptions and beliefs. Diversity in the context of inquiry can add rigor by pressing on a broader array of background assumptions and beliefs. And it can also expand the community of people who may accept a hypothesis or theory as warranted by its having been vetted by representatives with similar aims or background assumptions. This message deserves to be better known in the educational research community, which is nothing if not diverse.

Of course, contextual empiricism is by no means the final word in the debate over the acceptability of value judgments in social science. The closer science comes to contested areas of public policy—be it health care, education, public safety, or environmental policy—the more scrutiny the aims of science and the objectivity of inquiry are likely to receive.

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See also Educational Research, Critiques of; Evidence-Based Policy and Practice; Kuhn, Thomas S.; Philosophical Issues in Educational Research: An Overview; Popper, Karl; Positivism; Postpositivism

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VALUES CLARIFICATION

Popularized by the publication in 1966 of Louis Rath, Merrill Harmin, and Sidney Simon's *Values and Teaching*, the "values clarification" approach to moral education emerged in part from a recognition of the ethical pluralism in an increasingly diverse democratic society. Proponents of values clarification rejected the notion that moral growth is best achieved through the direct inculcation of a fixed moral code and argued that students faced a bewildering array of conflicting messages about appropriate models and values they should choose to adopt. Accordingly, students needed to develop reflective and deliberative skills of moral reasoning.

Now often used as a generic term for a range of approaches aimed at identifying participants' values and priorities, values clarification began as a specific curricular approach to moral education designed to elicit and clarify—but not interrogate or challenge—students' perspectives. (Students could be of middle school or high school age, but this same approach crept into some college classes.) The values

clarification process involved several steps: First, students freely chose, or identified, their values from a range of alternatives. Part of this choosing process included a consideration of the consequences of each alternative. Once students identified their values, they were asked to express and affirm those values, without any external evaluation or judgment from peers. Finally, students were encouraged to consider whether their actions matched their stated beliefs and, if not, how they might bring them into closer alignment.

Advocates developed dozens of curricular strategies for helping students enact the values clarification processes, activities that ranged from as little as five minutes to more than an hour each day. Some schools offered elective courses in values clarification, while others sought to integrate “valuing processes” into a range of preexisting academic content. Throughout all values clarification activities, educators were to refrain from imposing or even communicating their own values.

The central contention of the values clarification approach was that empowering students to clarify their own ethical preferences and priorities would change their behavior to reflect those values. While the values clarification approach to moral education enjoyed wide popularity during the 1970s, empirical research on its effectiveness suggested that it had little impact in promoting change in students’ self-concept, attitudes, or behavior. But it wasn’t until philosophical critiques were levied against the approach in the 1980s that values clarification began to fall out of favor as a formal curricular technique.

Philosophers of education criticized values clarification on a variety of conceptual grounds. Perhaps foremost was the lack of precision about what exactly was being produced by the values clarification process. Instead of helping orient students to substantive judgments about what is good and right, critics argued, values clarification simply surfaced students’ preferences; the distinction between what one *wants* to do and what one *ought* to do was not recognized.

In addition, philosophers of education criticized values clarification’s lack of rigorous critical engagement with moral choices. According to values clarification’s proponents, students needed the opportunity to choose and clarify their own beliefs and values rather than simply accepting the received wisdom of dominant ethical traditions. But critics argued that values clarification was ultimately no more reflective and thoughtful than the process of direct inculcation

it was striving against. Despite repeated references to critical thinking, the values arrived at through the values clarification process were not subject to sufficient critical scrutiny—considering the consequences of different options, for instance, did not include any means by which to judge the moral implications of different possible outcomes. Fundamental moral concerns such as liberty and justice, critics charged, were never addressed. As a result, the process of values clarification lacked any criteria by which to judge among claims; self-awareness and self-expression become endpoints sufficient unto themselves.

While values clarification as an officially identified curricular approach is practically nonexistent in today’s schools, its proponents contend that it left an important legacy of K–12 classroom exploration of previously untouched topics and provided a way for educators to help students explore controversial issues.

Robert Kunzman

See also Character Development; Citizenship and Civic Education; Moral Education; School and Classroom Climate; Socialization; Toleration; Values Education

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VALUES EDUCATION

The term *values education* can be defined as a multifaceted process of socialization in schools, which transmits dominant social values to provide and

legitimate the necessary link between the individual, the group, and society. Values education also encompasses the transmitting of moral and ethical traits and standards. This entry surveys the key issues in this field and the main approaches that have been adopted.

Values Education Trends

Values education is an essential part of school pedagogy, even though the nexus between values education and pedagogy is contested and problematic. The situation is further complicated because values education (and moral education) seem to be “subject to changes of fashion” (Winch & Gingell, 1999). For instance, an approach extremely popular in the 1970s was “values clarification,” in which the aim was to make students aware of their own values but not to evaluate or change them. However, in 1981, Alasdair MacIntyre reinterpreted and revived virtue theory, which was based on Aristotle’s *Nichomachean Ethics*; it became a very popular approach to values education, and values clarification withered (but did not die). Advocates of virtue theory argued that moral concepts and values should be explicated in terms of character traits, which children can internalize with the assistance of classroom pedagogy and reflection. (In the Soviet Union, this process of moral education was known as *vospitanie*, or upbringing.) The desirable character traits or virtues that are often identified include tolerance, altruism, asceticism, benevolence, honesty, courage, fairness, moderation, conscientiousness, selflessness, sincerity, humility, modesty, magnanimity, sympathy, tactfulness, diligence, nobleness, trust, self-mastery, solidarity, and frugality.

A key issue for the field of values education, one that persists across the “changes in fashion,” is whether values are to be “caught” or taught. Values such as peace, tolerance, courage, civility, honesty, moderation, and frugality can be taught about, and arguably should be taught about, to all students if a truly caring and responsible democratic community is to be maintained. But is this enough? Should the aim of instruction be that students not merely *know about* tolerance, for example, but also *become* tolerant? This question raises thorny issues about indoctrination, which is usually regarded as antithetical to education—issues that cannot be pursued in the present entry.

Values Education in Schools

In considering approaches to be used in classroom pedagogy relating to values education, the issue is

not so much methodological or pedagogical but rather one between the “believers” and “nonbelievers” concerning the efficaciousness of teaching values in the classroom. The philosopher Gilbert Ryle, who criticized moral education in schools, argued that morality is caught, not taught. He argued that if we define teaching as “the passing on of expertise,” then any notion of moral expertise seems “deeply dubious” (Winch & Gingell, 1999, p. 148).

Straughan (1982), on the other hand, in his critique of dominant approaches to the content and structure of values education, and the contested areas and boundaries between moral reasoning and the content of morality, suggested a pragmatic approach to values education, based on what could be called the 3Ms of moral education:

Teaching that informed decisions must be made in making moral choices

Teaching children how to think for themselves as autonomous moral agents

Teaching children to want to be moral (to guarantee moral goodness in an individual)

To adopt Straughan’s approach to values education, especially teaching students to want to be moral, pedagogues should be role models—that is, they should act morally themselves and try to exemplify the role of moral agents.

Approaches to values education in the classroom have the following among their specific goals:

Helping students appreciate one another’s cultural differences

Helping students and teachers identify cultural stereotypes as presented in the media, when teaching values of cultural diversity

Teaching students to avoid using language that is insensitive, offensive, embarrassing, or damaging

Helping students adopt multiple perspectives, conceptualizations, and behaviors

Helping students be respectful and tolerant of other students with different backgrounds and beliefs

Helping students understand that social responsibility extends beyond local and national boundaries

Strategies for Teaching Values

Many approaches exist for explicitly undertaking values education in the classroom. In the history/civics

classroom, for example, the many approaches to values education include the following:

Inculcation instills, or attempts to instill, socially desirable values in students—through direct teaching, including storytelling, or indirectly through routine practices in the classroom, role models, reinforcement, praising, simulation, and role playing. (But, as mentioned earlier, it is debatable whether inculcation is a genuinely educational aim in a democracy, where personal autonomy is valued and indoctrination is eschewed.)

Values clarification allows students to be more socially aware and become critical thinkers. It also helps students understand and accept everyone's values and beliefs. It also includes practical activities to clarify feelings toward persons, events, or issues.

Social action and participation assumes that individuals learn values best by practicing them. There are numerous examples of social action and participation projects, including EfS (education for sustainability), “circles of democracy” (coined by Goodman, 1994) in the classroom, human rights education, social justice, and so on.

The trait approach refers to values that are classified as more important than others; it involves teaching a set of qualities such as honesty, loyalty, and compassion.

The service-learning approach involves activities at school and in the community, where schools should provide experiences as opportunities to practice making a *choice of actions*.

The cognitive-development approach is seen as a movement through stages of moral development. This helps students improve reasoning and differentiate right and wrong decisions. It also includes activities based on moral dilemmas, small group discussions, and decision-making tasks to further develop students' values.

Role plays explore multilayered values in complex moral scenarios.

The empathy approach involves an informed understanding and interpretation of cultural diversity, or the values of others in different cultures.

The time-traveler approach involves looking back at historical events, locating them in a time continuum, and relating them to current events in history.

The Politics of Values Education

The current debate concerning values education has become an overtly partisan political one. Purpel (1999), for example, argues that values education has become a “metaphor and code” for pedagogy pursuing the neoliberal and conservative social and cultural agenda. In some ways, according to Purpel (1999), the values taught in schools are traditional rather than modern:

The values taught in the schools are very much in line of Puritan tradition of obedience, hierarchy, and hard work, values which overlap nicely with the requirements of an economic system that values a compliant and industrious work force, and a social system that demands stability and order. (p. 89)

Thus, global values education now embraces excellence and quality in academic achievement. This neoliberal ideology in education is characterized by a relentless drive toward performance, global standards of excellence, globalization of academic assessment (e.g., the Organisation for Economic Co-operation and Development's Programme for International Student Assessment), global academic achievement syndrome (Organisation for Economic Co-operation and Development, World Bank), and schools' league tables—tables ranking schools by performance. It should be recognized that the curriculum is an ideological construct, and discourses surrounding cultural and political dimensions of schooling should emphasize the ideological nature of school subjects and moral, character, and values education (Purpel, 1999; Zajda, 2009b).

For values education to be meaningful, engaging, and authentic, it must involve a greater sense of community, more emphasis on cultural diversity, and a deeper and critical understanding of democracy, equality, human rights, and social justice for all. In schools, where values education and critical literacy are taught, values should be discussed rather than imposed. In short, values education in schools represents our quest for the ideal of the morally good society.

Joseph Zajda

See also Ideology; Indoctrination; Moral Education; Values Clarification; Virtue Ethics

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VERSTEHEN

See Hermeneutics

VIRTUE ETHICS

Virtue ethics is an umbrella term covering a group of theories that argue for a primary or central role for the concepts of “virtue” and “character.” The modern revival of interest in virtue ethics focuses

mainly on Aristotelian ideas of eudaimonistic ethics, although alternative accounts of virtue ethics take inspiration from the writings of Plato, David Hume, and Friedrich Nietzsche. This entry concentrates on Aristotelian virtue ethics, as this account of the virtues has been the most influential in the literature and has the most to say about moral education.

The revival of virtue ethics starting in the past decades of the 20th century has gone through two distinct phases. The first phase was a time of discontent with and critique of the other two alternative, rival normative theories—deontology and consequentialism. Philosophers such as Elizabeth Anscombe and Bernard Williams criticized deontology and consequentialism on a number of grounds. They argued against an overreliance on rigid and inflexible rules that failed to capture the complexity and context specificity of moral problems. They were dissatisfied with a narrow conception of morality that left no room for the special considerations inherent in partial relationships such as friendships. They rejected an account of morality that could not account for a fuller conception of what it means for human beings to lead a fulfilled and meaningful life. They even called for a change in the fundamental question we should ask when we engage with moral philosophy, from the specific, narrow, and restricted “What should I do here, now, with this problem?” to the wider “How should I live my life? What kind of person should I be?”

The second phase of the development of virtue ethics is a more positive one, one which seeks to present an account of what the good life might be like understood via the concepts of virtue and character. The primacy of virtue is captured by two thoughts: (1) the idea that moral praise and blame are appropriate judgments of the agent's character and (2) the idea that the virtues are linked to human nature. While consequentialists define right action in terms of good consequences and deontologists focus on the importance of the motive of duty, virtue ethicists argue for the primacy of moral character. Virtue ethics answers the question “What kind of person should I be?” by advising us to have virtuous characters, characters that have stable dispositions to think, feel, and act virtuously. The virtues are linked to human nature via the function argument. For example, for Aristotle, the distinctive function of human beings is the ability to reason. To lead a good life, the life of eudaimonia, one has to fulfill the characteristic function of humans

qua humans—that is, to reason well. The virtuous person is the person of good character, the person who demonstrates excellence in practical reasoning; moral judgments are judgments of a person's character.

Virtue is “a purposive disposition, lying in a mean that is relative to us and determined by a rational principle, and by that which the prudent man would use to determine it” (*Nichomachean Ethics*, 1106b35–1107a3). So the virtues are character traits that are developed over a period of time into stable and reliable dispositions to act in particular ways—that is, to act in accordance with the noble and the good as that is determined in each situation and with reference to the particulars of that situation. Crucial to virtue ethics is the long and difficult process of moral character development that results in the ability to perceive the morally salient features of situations as well as the practical wisdom to be able to do what is right because one knows it is right, chooses it knowingly, and with the right feelings. The virtue of kindness, then, is the ability to recognize the need to be kind as determined by reference to particular situations and relative to the agent himself or herself, and it typically results in a kind response that involves both cognitive and affective elements and proceeds from a stable and reliable disposition to be kind.

The questions of how we go about developing good moral characters, how we come to have stable and reliable dispositions toward the noble and the good, and how we become virtuous people are central to virtue ethics. In Book II of the *Nichomachean Ethics* (Bekker number 1103a14ff), Aristotle points out that while we are not born virtuous, we have the potential to develop virtue. However, this potential will be actualized only if a number of factors work in our favor. The moral life is a fragile and vulnerable enterprise; to become virtuous, we need a number of positive influences and a great deal of luck. Character development takes place over a very long period of time, possibly an entire lifetime, and is affected by a number of factors that may or may not be available. This makes the possibility of virtue both rare and possibly not open to those of us who come across really bad luck in our moral endeavors. This may seem unfair and elitist, but another way of looking at it is to accept and embrace the fact that it is the very vulnerability of the good life that makes it valuable in the first place.

The role of education in character formation is to control, guide, and shape the many factors that influence our development. Character formation is influenced by our habits, the people we surround ourselves with and take as examples, the temptations and difficulties we come across, the examples we are impressed by, how others respond to our success and failures, and so on. Imagine a child who is unfortunate enough to be born to neglectful parents, to have wayward friends and disinterested teachers, and to be surrounded by temptations and pressures to do wrong; developing into a virtuous person will be much more difficult for this child than a child who is surrounded by positive examples and influences. A child who is nurtured appropriately, is encouraged in all that is good, is surrounded by all that is positive, is presented with tasks of appropriate difficulty, and is helped to learn the right lessons from her failures is much more likely to grow into a virtuous person.

Any project of moral character formation will face a dilemma: On the one hand, for education to be meaningful, it must have content, it must point to a specific path, and it must be guided by the teacher; on the other hand, because agency, choice, and responsibility are central elements of morality, moral education cannot take the form of indoctrination or forced compliance. The difficulty is in combining the two, so that moral education both contains appropriate content and fosters agency. One possible solution is to focus less on transmitting specific and potentially contentious virtues and more on the development of the reasoning and affective skills necessary for virtue.

Aristotle warns us that it is not enough to merely do the right thing; we must do the right thing for the right reason, so perhaps, the role of moral education is to help students develop reasoning skills so that they can determine the right action for themselves. Relevant reasoning skills may include becoming sensitized to the moral aspects of the world, becoming better at perceiving these moral particulars and judging their relative weight by developing the ability to form moral arguments, becoming better at engaging in meaningful debate with others, and so on. In that way, we not only see what we should do but also understand why we should do it. This solution does not guarantee correct answers, but in a sense, an answer is never correct if it is imposed externally—moral responses must be an expression of the individual's choice, and part of this process is

making mistakes and learning from them. So while the answers individuals will arrive at will not be infallible, they will at least be genuine.

At the same time, it is important to recognize that for Aristotle character development is as much an affective as it is a rational project. Emotions play a crucial role in virtue ethics, assisting us in perceiving the world in a particular way, being motivated to respond to moral demands correctly, and helping us imagine, and empathize with, the correct response. Therefore, another important role for education is to find ways to move hearts as well as engage minds.

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See also Aristotle; Character Development; Happiness; MacIntyre, Alasdair; Moral Education; Noddings, Nel

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VOCATIONAL EDUCATION

This entry first explains the concept of vocational education and its place within the broader context of a worthwhile life. In contrast to training, vocational education prepares employees to exercise independent judgment, demonstrate theoretical knowledge, and take responsibility in implementing projects in a team setting—tasks for which training is inadequate preparation. Because vocational education also enables individuals to participate more fully in civic life and contributes to self-fulfillment generally, it can also be seen as an element of social justice. It is

as valid a form of education as liberal education and should be planned for just as seriously.

What Is Vocational Education?

Vocational education is an educational preparation for employment. As an educational preparation, it involves learning to take part in something worthwhile, or at least in something considered to be worthwhile by the person or persons sponsoring the education. Vocational education is thus an aspect of education more generally, namely, a preparation for a worthwhile life that involves learning. However, to say that education is a preparation for something worthwhile is bound to raise questions for *vocational* education, since it does not seem obvious that a preparation for employment is necessarily for something worthwhile, at least for the individual concerned. The question of worthwhileness tends to haunt any discussion of the nature and value of vocational education and sometimes gets confused with questions about the value of *vocational training* (see the next section of this entry).

If we think of education as concerned with three major aspects of human life—life as an individual, a citizen, and a worker—then vocational education ought to enjoy a secure place in the educational pantheon, but generally, it does not. One very important reason for this is not difficult to see: Employment, either paid or self-directed, has historically been seen not as part of a worthwhile life, but, at best, as only a possible preparation for a worthwhile life that does not involve employment. Such a view, dating from the time of Plato and Aristotle, takes it for granted that a worthwhile life can consist of some combination of leisure, the company of friends, civic engagement, contemplation, and self-cultivation. So while it seems fairly clear that preparation for civic or individual purposes is educational, as these are considered to be unproblematically worthwhile, this is less obviously the case for preparation for employment. Many would argue that no education that failed to take into account the individual needs of the student and the possibility of their participation in civic society could count as worthwhile for *anyone* and, thus, as an education at all.

Philosophical ideas about education have, in the main, tended to focus on the interests and needs of the ruling groups in any society, ranging from the oligarchs of Athens to the gentry and aristocracy of 18th-century Britain. It is a comparatively recent development for educational theorists to take

account of the needs of the large proportion of the population who must work for a living. The implications of this change, which arise from the development of industrial economies and the emergence of democracy, have not always been fully appreciated by educational theorists.

Can anything general be said of any institution or process that calls itself educational? All societies aim to bring up their young so that they can assume positions in adult life. This involves acquiring knowledge and abilities that will enable them to lead worthwhile lives. However, people differ in their views as to what constitutes a worthwhile life and whether a life of employment *could be* worthwhile. Of course, members of a leisured elite might not consider employment a worthwhile option for themselves, although, at the same time, they might believe that it is necessary for some members of society to follow a path of employment, and for these persons, preparation for a life of employment would be worthwhile. However, the fact that a powerful and influential group in society consider vocational education to be a second-rate option cannot but diminish its attractiveness in the eyes of the rest of society. Thus, although vocational education appears to be a necessary feature of any reasonably economically developed society, there are problems in making it sufficiently attractive to be an option that is taken seriously, either by employers or by potential employees.

A solution to this problem has been adopted in northern Europe and the German-speaking countries, which is to ensure not only that the technical aspect of vocational education is rigorous and relevant to the workplace but that liberal and citizenship aspects of education are also incorporated within it. This strategy does not work unless the occupations that vocational education supports are well remunerated and enjoy relatively high prestige within the society, as is in fact the case in Germany and Scandinavia, for example.

Vocational Education and Training

Vocational education is very often confused with vocational training, or even with training more generally. *Training*, the inculcation of skills that allow for confident performance of tasks, is a necessary part of any education. It is to be distinguished from *drilling*, which involves the inculcation of behaviors that do not require any judgment for their execution (Ryle, 1949). Training is important in vocational

education, but that is precisely because vocational education requires the application of knowledge (particularly systematic and/or theoretical) to practice and because it incorporates a civic and individually oriented element; it is not the same as training. However, the fact that vocational education prepares its students and apprentices for the exercise of independence and responsibility within the workplace makes it different from training. Educated employees must not only act skillfully and make judgments in the course of carrying out their activities, but they are also expected to be able to plan, control, coordinate, and evaluate larger-scale operations (projects) while working with teams of other employees. Training is, by itself, an inadequate preparation for such a role. The ability to manage a project is the outcome of vocational education of the kind found in northern Europe and involves much more than the exercise of skill, or even judgment, as part and parcel of skilled performances.

However, preparation for the kind of employment that involves the carrying out of tasks requiring some, although relatively limited, discretion and judgment but little workplace independence or responsibility, with no further technical, individual, or civic development, could be satisfied by training. Indeed, much of what passes for vocational education in the English-speaking countries involves little or no more than training. This should not mislead one into thinking, however, that vocational education should be identified with training. Whereas training involves preparation to carry out specific tasks, vocational education involves preparation in its widest sense for that part of life that involves employment. What the philosopher Gilbert Ryle calls drilling, on the other hand, involves inculcation into the confident performance of routines that call for no discretion and judgment. Sadly, some preparation for employment involves the need for little more than drilling.

Evidently, employment involves know-how (not necessarily only skill). But how should we understand know-how? One influential answer, by Jason Stanley and Timothy Williamson, is that it consists of knowing that there is a way to do the appropriate task. Whatever the wider philosophical merits of this answer, it does appear to identify know-how with the *mastery of technique*. There are problems with this account, however, because it is not strictly accurate to identify know-how with mastery of technique.

First, one can master the technique for doing something without actually being able to do that thing in an appropriate context. Thus, I may be able to lay

bricks in a college environment but be unable to do so on a construction site (which is where, ultimately, the technique needs to be applied). The second problem is that I may know how to do something (e.g., land an aircraft all of whose engines have failed) without having a technique for doing so. In such a case, I devise a technique on the spot, and there is no available technique for devising a technique. It is arguable that much of what we call “skilled work” falls into the former category and “expertise” into the latter. If this is the case, then vocational know-how often requires more than mastery of technique.

Second, many operations require theoretical knowledge. How is this accounted for? One answer is that theoretical knowledge generates rules for performance and that the practitioner needs to understand and follow these rules without knowing the background theory. Another answer is that the practitioner needs to understand the theory in order to make a judgment about what should be done. Who is right? In the first instance, the answer could be that such individuals would not be able to act in a sufficiently flexible way if all that was available to them were prescriptions for action. In the second case, one might object that the practitioner does not need an expensive and lengthy education in technical theory if he or she does not often need to use it. These alternative responses demonstrate the difference between vocational education and training. In the first instance, the trained operative employs the rules, tweaking them slightly to take account of small variations in operational conditions. In the second case, the professional worker with expertise is expected to exercise a considerable degree of discretion and judgment and to cope with unexpected and complex situations competently. The approach that the state or an employer adopts to preparation for work reflects a general attitude as to the kind of employee that the nation or the employer deems appropriate for a particular occupation.

Justice and Vocational Education

Although it is obvious that vocational education is concerned with preparing future employees for work, the discussion so far has suggested that this is not its only purpose. The specific aims of vocational education are closely connected in a number of ways to social justice, the development of individuality, and civic responsibility.

If we consider that justice is partly about giving individuals the opportunity to fully participate

in their societies, then vocational education should make this a priority at a number of levels. First, it should enable individuals to work in satisfying and reasonably well-paid jobs, preferably in well-regarded occupations. This should be a focus of the *technical* part of vocational education, but not only of the technical part. Second, it should enable the development of individuals who can chart and control their own course in life. This means that they should be prepared for work but in such a way that their preparation has a wider impact on their life, allowing them to develop increased independence and responsibility in relation to other aspects of living. But it should also give them access to powerful knowledge—that is, the kind of knowledge that allows them to play a part in the direction of their enterprises, trade unions, communities, and governing structures. This means that they should receive instruction not just in technical subjects but also in the broader range of subject matter that allows individuals to develop their own interests independently and enables them to understand how their society works—that is, they should gain some knowledge of subjects such as history, mathematics, science, and a foreign language. Such provision exists as a matter of course in many European countries, for example.

If taken seriously as a path to independent and responsible citizenship, vocational education has as much to offer young people as traditional liberal education. The conditions for making this happen, however, can be difficult to bring about. Many different stakeholders, including employers and employees, as well as the state, need to be persuaded of the value of vocational education and to be committed to it. This in turn means that the society needs to value responsible work and informed citizenship. Sadly, these conditions are not always fulfilled, and frequently, cultural barriers and historically rooted prejudices militate against its happening. Vocational education has yet to fully establish itself as a generally accepted form of education.

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See also Education, Concept of; Peters, R. S.

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VYGOTSKY, LEV

Lev Vygotsky (1896–1934) is the most celebrated Russian psychologist, both in Russia and worldwide. His popularity today is so immense that some authors refer to a “Vygotsky boom” or, somewhat skeptically, a “Vygotsky cult.” Yet, at the same time, Vygotsky is the most controversial, mysterious, and self-contradictory of Russian psychologists. Thousands of laudatory scholarly papers uniformly glorifying Vygotsky as the founder of virtually any idea in psychology and education are almost outbalanced by a fairly consistent critique of the multitude of conflicting and contradictory “versions of Vygotsky” featured in this literature, Western and Russian alike. Most often, this critical Vygotskian literature identifies Western interpretations of Vygotsky as the key to the problem of “understanding Vygotsky” (see also van der Veer & Valsiner, 1991) and calls for getting back to the “original texts”—that is, Vygotsky’s texts translated into English (Miller, 2011). This, however, hardly solves the problem, for the translations appear highly problematic, selective, and even in certain instances largely distorted (van der Veer & Yasnitsky, 2011). Furthermore, even the Russian texts of Vygotsky that were posthumously published in the Soviet Union appear heavily edited, censored for politically incorrect statements, and, even in a few cases, faked (for the discussion of a case of the so-called benign forgery and associated problems, see Yasnitsky, 2012). Under these circumstances, the most reliable “version of Vygotsky” seems to be the one that is developed in the recent studies and publications of the group of “revisionist” scholars, whose research is solidly grounded in archival, historical, and textual materials (see Yasnitsky, 2010, 2012). This revisionist narrative necessarily takes into account the life story of Vygotsky and his Russian and international associates against the background of the sociocultural history of the interwar period and addresses (a) the axiomatic base and foundational principles of Vygotsky’s thinking, (b) the activities of his first “instrumental period” of the 1920s, and (c) the dramatic “holistic revolution” in Vygotsky’s

thought and his struggle for the integrated theory of human consciousness and sociobiological and cultural-historical development in the 1930s. This entry presents an overview of that revisionist narrative and the consequent importation of Vygotsky’s ideas into the West—albeit sometimes in mutated form—and briefly assesses Vygotsky’s continuing influence in the domains of psychology and education theory.

Axiomatic Base and Foundational Principles

Vygotskian scholarship is often criticized for ascribing to Vygotsky certain “pioneering ideas” that, in fact, do not belong to him and, in a few instances, were widely shared by many of his contemporaries. It can be said that the whole set of Vygotsky’s beliefs, attitudes, and values that together constitute the axiomatic base of his theory belong to this socially shared set of revolutionary ideas of the Russian intellectual milieu of the early 20th century. Most of these are pretty much at odds with our ideas about the world, at least from the dominant contemporary “Western” perspective.

First, as a child of his time, Vygotsky spent all his youth in the cultural environment of the provincial town of Gomel within the borders of the Jewish Pale of Settlement at the western outskirts of the Russian Empire. Being raised in a prosperous, secular Jewish family, Vygotsky received extensive training in a wide range of subjects, but he was leaning toward literature, arts, theater, and the history and culture of the Jewish people. His earlier writings of the period of his studies at Moscow University (1913–1917) reflect his interest in the topic of literary criticism; romanticism in the German tradition of Wilhelm Humboldt and his followers; mysticism; a preoccupation with the “Jewish question”; and a fairly critical attitude toward socialism and related ideas of the transformation of society. In Russia, a major, truly dramatic transformation of the entire system of values took place soon after the Socialist Revolution of 1917 led by the Bolshevik faction of the Russian Socialist Democratic Labour Party (later renamed the Communist Party). However, the “romantic” historicism and preoccupation with literature, art, language, and culture remained among the set of Vygotsky’s foundational ideas until the last days of his life.

Second, it is virtually impossible to adequately understand Vygotsky outside the utopian cultural context of Russia that surfaced in the widely shared belief in the possibility of radical transformation of

the entire social framework that Vygotsky wholeheartedly espoused soon after the Revolution of 1917. This Soviet idea, although not particularly original, resonated with a wide range of modernist movements of the early 20th century, for instance, with the American progressive movement. However, what distinguished the Soviet brand of this progressivism was the firm conviction that human nature—similar to social life—could become the object of Promethean experimental interventions and that creation of a new, more advanced human type (a higher stage of human evolution, a “new man,” or a genius-like “superman”) was one of the goals of the postrevolutionary era. In his various writings of the mid-1920s, Vygotsky clearly proclaimed his commitment to the messianic mission of creating a new, revolutionary psychological theory of the human psyche and consciousness and, at the same time, of finding concrete scientific methods of normative production of such “new men” of the Communist future.

Third, another important constitutive element of Vygotsky’s axiomatic base was his involvement with the official philosophical basis of most of scientific research in humanities and social sciences in the Soviet Union—the philosophy of Marxism. Vygotsky’s Marxism had little to do with economic theory or its contemporary political interpretations. Furthermore, in some of his writings, he clearly expresses his distaste for direct application of Marxist ideas to psychological theory. Instead, on a higher level of generalization, Vygotsky borrows from Marxism certain principles that appeared to have promise for dealing with the problems he saw in the human sciences. One of these ideas is the imperative to analyze any phenomenon as a dynamic, historically developing process, rather than as being static. Another important idea is the leading role of interpersonal exchange, dialogue, culture, and society in human development.

All these general principles and beliefs, which Vygotsky shared with many of his contemporaries, inspired his work in diverse and quite often contradictory ways.

“Instrumental” Psychology

Although he wrote copiously on the topics of human development and education, Vygotsky virtually never carried out studies in educational settings. Instead, the main sphere of application of his talents during the most productive last decade of

his life (1924–1934) was the field of special education, or “defectology,” as it was referred to in the Soviet Union. By analogy with handicapped people using special aids to compensate for their physical disabilities, and building on his youthful fascination with Romanticism’s emphasis on cultural processes, Vygotsky created a blend of the two and proposed the idea of “cultural mediation”—that is, the use of special “psychological tools” that are instrumental in human development by helping individuals gain control over their own psychological processes. The utopian, Promethean dimension of Vygotsky’s thinking is particularly clear in his proposal to build a “theory of cultural development of higher psychological functions” on the basis of research on the use by individuals of special instruments to master their own behavior in order to reach higher, more advanced stages of cultural development. In a series of experimental studies that Vygotsky conducted with his associates in the 1920s, he showed how children who used special auxiliary “stimuli,” or “signs” learned to master their “psychological functions” in the experimental settings used to study problem solving, could eventually develop “higher” functions such as logical memory or voluntary attention. The idea of external “psychological tools” in facilitating development, according to Vygotsky in the 1920s, was supposed to demonstrate the role of culture as the instrument of “mediated,” cultural development.

The second most important general idea of Vygotsky’s “instrumental period”—the social origin of the human mind—was supported by observation of children’s performance in these situations of problem solving, which led Vygotsky to extensively quote the French scholar Pierre Janet (1859–1947), who in his general law of cultural development stated that every psychological process in its development passes from the external, interpersonal to the internal, intrapersonal stage, or, in other words, gets “internalized.”

The ideas of this period were expressed in several scholarly articles that Vygotsky published in the 1920s. Also, he attempted to formulate a general “instrumental” theory of cultural development, but he never finished any of the several larger works he was engaged with at that time. These draft manuscripts, however, were uncritically published after Vygotsky’s death under titles that never occur in Vygotsky’s records (e.g., *The History of the Development of Higher Mental Functions*), with considerable editorial omissions and interventions,

and were subsequently commonly believed to present the core of Vygotsky's theory.

Toward "Holistic" Theory

It appears that at the end of the 1920s or the beginning of the 1930s, Vygotsky experienced a major personal and professional crisis caused by his utter dissatisfaction with the state of his theory, and a combination of personal, sociopolitical, and theoretical factors. On a number of occasions in his papers, oral presentations, manuscripts, private notes, and personal correspondence with his associates, Vygotsky expressed his criticism of their theory of cultural development for its utter abstractness and unclear practical applicability and for its radical separation between the higher and the lower psychological functions; the emphasis on the signs and the ignorance of the world of meanings; the gap between intellectual, volitional, and emotional phenomena; and the neglect of the structural and systemic nature of virtually all psychological processes. The whole system of theoretical concepts was undergoing major reconstruction and reformulation in his mind. This radical shift can be best understood as the dramatic transition from the "instrumentalism" of his earlier period to the "holism" of the last two to three years of his life (1932–1934).

Vygotsky developed his "holistic" views in accordance with his Romantic and Marxist awareness of the priority of personality, culture, and consciousness, and under the influence of German scholars of the Gestalt school, with several of whom he and his associates personally met, corresponded, and collaborated. Holism postulates the priority and the dominance of the whole over the constitutive elements, atoms, components, and parts; as a result, holism regards the human being as a whole, integrated organism, rather than as being a composite mechanism readily analyzable into parts. It was during the holistic period that Vygotsky abandoned his earlier mechanist speculations about stimuli, reflexes, "psychological instruments," and reactions and forcefully argued against research on elements and in favor of "analysis by units" that preserve all characteristics of the whole. In the writings of this period, Vygotsky speculated about a number of such "units of analysis" that would take into account social, personal, intellectual, emotional, and biological characteristics of a human being within his or her psychological environment. Perhaps the most famous notion of Vygotsky's, the "zone of proximal development" that

designates the difference between the level a child could achieve when acting without assistance and the level attained via assisted performance, was introduced in Vygotsky's writings of the last two years of his life, but—like many other innovative ideas of the period—remained only briefly sketched, not operationalized, and underdeveloped theoretically.

The history of the importing of Vygotsky's ideas into the West is well documented (Valsiner, 1988) and is marked by a number of publications of the 1930s, 1960s, and 1970s that were initiated mostly by left-leaning intellectuals sympathetic to the Soviet Union or the prosocialist case and who were struggling to bring the issues of culture, mind, meaning, and consciousness back into the human sciences (see Bruner, 1990). But real popularity in North America did not come to Vygotsky until the 1980s when his ideas were widely disseminated, primarily among educationists, and presented, quite mistakenly, in sharp contrast to the ideas of Jean Piaget, who had remained a cult figure throughout the 1960s and 1970s.

However, despite the actual "Vygotsky boom" in North America, the imported version of Vygotsky's theory in the West failed to preserve the whole complexity of Vygotsky's theory and is largely fragmented, if not misguided. This is why the celebrated notion of the "zone of proximal development" was disseminated as an idea that a child learns from the external input from a "knowledgeable other" that, on the one hand, is fairly distant from the vague and imprecise meaning of this expression in various Vygotsky's writings of 1933–1934 and, on the other hand, in fact, is quite in agreement with the mainstream behaviorist thinking about learning and development with its emphasis on external "reinforcement." Therefore, it is the rapidly developing theory and practice of dynamic assessment (see, e.g., Haywood & Lidz, 2007) that remains perhaps the most notable, concrete, and important educational application of Vygotsky-inspired ideas in Western educational system. On the other hand, the integrative and holistic potential of the developmental science advocated by "the Mozart" and "the Beethoven of psychology"—Vygotsky, and his closest and most important associate Alexander Luria (Toulmin, 1978)—has been largely ignored to date, and it is yet again put on trial in the renewed proposal of the "romantic science" (Sacks, *in press*) of the integrative cultural-historical and bio-social psychology (Yasnitsky, van der Veer, & Ferrari, *in press*).

See also Activity Theory; Bruner, Jerome; Marx, Karl; Piaget, Jean; Progressive Education and Its Critics; Social Cognitive Theory

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W

WALDORF EDUCATION: RUDOLF STEINER

Rudolf Steiner (1861–1925) was an Austrian polymath: a philosopher, social reformer, educator, artist, and architect. Through his founding of a spiritual movement, anthroposophy, he articulated teachings on topics ranging from Goethean science to art, medicine, economics, and education. The worldwide movement of Waldorf education is perhaps the greatest long-term example of holistic education. This entry discusses Steiner's views on spirituality, its role in human existence, and his understanding of human development. It then describes the history of Waldorf education, its purpose and curriculum, and the expansion of Waldorf schools across North America.

Although academically precocious as a youth, Steiner attended trade rather than academically oriented schools. Still, Steiner taught himself the more academic curriculum. After working as an editor of Goethe's scientific writings and as a tutor for a child with a brain malady, Steiner developed an understanding of education, which later helped him conceptualize Waldorf schools. Also influencing Steiner's (1977) later ideas about education were an undercurrent of spiritual experiences leading him to write, "The spiritual world is a reality . . . as certain to me as the reality of the physical. But I needed some kind of justification for this assumption" (p. 29).

In 1900, Steiner took part in theosophy, a European spiritual movement that combined a study

of world religions, ancient mysteries, philosophy, and psychic investigation. In 1912, Steiner broke with the group and, with a number of German individuals, formed the Anthroposophical Society, based on Steiner's writings and lectures. Six years later, Steiner would employ anthroposophical ideas to help educators understand the grand scope of human development taking into account reincarnation.

Anthroposophy

Like theosophy, anthroposophy provides an intellectual rationale and meditative practices for spiritual investigation. Unlike theosophy, which looks to Eastern religious practices, anthroposophy is anchored in esoteric Christianity. Three major principles of anthroposophy help us understand the spiritual experiences from which Steiner would later devise his ideas about the purpose of education and the development of the soul.

First, according to Steiner, interpenetrating the visible world is a spiritual one. Therefore, attempts to solve problems on a solely material level would eventually fail. Second, human beings have the potential to perceive and enter into the spiritual world through latent organs of perception. The third key principle is that when spiritual investigators achieve an advanced stage of apprehension, they can consciously enter into an objective spirit, and their findings can be articulated and tested. Since anyone who engages in anthroposophy can with great effort and practice achieve such abilities, this new spiritual perception helps one understand the physical world in greater depth. As a result of his spiritual

research, among many other things, Steiner offered a holistic conception of human development that took into account a developmental unfolding of physical, emotional, and cognitive capacities.

Steiner's Conception of the Human Being

Steiner described humans as spiritual beings with many aspects, and he conceived of a fourfold human being with physical, etheric, astral, and ego bodies. Steiner viewed human beings as having a physical body, which can be likened to the mineral world—material and lifeless; an etheric body, or life force, like all living things, including plants; an astral or feeling body, which is the source of thought and emotion and is present in all animals; and an ego, or a sense of the individual “I.” For Steiner, the ego or soul is the source of self-consciousness and differentiates humans from the plant and animal kingdoms. This ego allows for the capacity of inner motive, distinct from instinct or desire that exists elsewhere in the animal kingdom, and especially the capacity to create, to generate new and surprising realities in the physical world. Developmentally speaking, these forces grow at different stages, and it is incumbent on educators to work on these bodies to achieve the healthy development of the human being.

Three Stages of Development

Steiner developed a holistic theory of human development, focusing not only on cognitive growth but also on emotional and volitional development. Steiner describes the young child as a still-developing physical body. Gradually, the etheric life forces provide for an awakening capacity. During this stage, children learn through imitation. The next stage begins around the age of seven, with the loss of baby teeth as one of many indicators of the etheric body completing its task of developing the physical body. Steiner characterized this next stage as the time of feeling, which continues up to the time the child reaches puberty and enters adolescence. At this stage, the child learns best through teaching with vivid pictures, images, and rhythm. Finally, the third stage, from the age of 14 to 21, is marked by the release of the body of consciousness, the astral body. Thinking and judgment are the two foci for this phase of development.

The Start of Waldorf Education

On April 23, 1919, Rudolf Steiner was invited by a progressive industrialist, Emil Molt, part owner and

manager of the Waldorf-Astoria Cigarette Factory in Stuttgart, Germany, to lecture to workers at the factory. Several days after the speech, Steiner met with Molt and others to discuss the formation of a school, and the Waldorf school opened in Stuttgart on the grounds of the cigarette factory in the fall of 1919 with 253 children. The first Waldorf school in the United States opened in New York City in 1928. Today, there are approximately 160 independent Waldorf schools in North America (excluded from this number are charter schools inspired by Waldorf education and programs operating in public schools).

Waldorf Curriculum

The purpose of Waldorf education is to promote social renewal and transformation through a developmentally based education focused on the growth of each child's capacities as a human being. Early childhood programs are play based to allow the child's full life forces to be free to support his or her healthy physical development. The elementary program focuses on the feeling life, bringing content through story, while the secondary program works to cultivate intellectual and critical thinking skills. While anthroposophy is not taught in Waldorf schools, it is the basis for the pedagogy.

What takes place in a Waldorf school or classroom will vary, but in general, one might expect several key elements. In the early childhood program, attention is given to physical activity, rhythm, and creating an environment worthy of imitation. The day often includes a walk; songs and games; a homemade snack; an activity of painting, gardening, or handwork; and story time.

From first through eighth grade, students learn core academic subjects such as math, language arts, social studies, and science, largely through stories and experiential activities that include drawing, painting, clay modeling, poetry, and drama. For example, middle-school students may hear the biography of a particular scientist and be expected to create a drawing of the scientist, in addition to documenting a lab experiment to demonstrate a particular principle. One constant across grade levels is the *main lesson*, a two-hour block of time set aside each morning, in which a particular subject is taught over three to four weeks. Through the use of this extended block of time, Waldorf educators teach the content in an interdisciplinary manner. In addition, students take two foreign languages and receive instruction in singing, wind and string instruments,

eurythmy (an artistic activity in which students make movements to words or music), form drawing (making geometric shapes), knitting, and woodworking. While many of these subjects are taught by specialized teachers, ideally, one classroom teacher remains with the same group of students from first through eighth grade.

The secondary school provides a continuation of the earlier curriculum with a greater emphasis on critical and analytical thinking skills and social responsibility. As the adolescent develops the capacity for independent judgment, the format of the main lesson continues with teachers who have specialized expertise in their fields.

Steiner believed in the freedom of the teacher to provide the appropriate educational experience for the children, and he opposed a dogmatic implementation of his ideas. Thus, while teachers have freedom in the classroom, they are guided by Steiner's indications, and Waldorf classrooms have similar style, scope, and sequence.

Supporting Waldorf Education

The Association of Waldorf Schools of North America, formed in 1979, assists schools by providing educational resources and a support network for teachers. Waldorf teacher training institutions are established in nearly 20 locations throughout North America. And today, there is a growing interest from homeschooling parents as well as parents and teachers in both public and charter schools. As Waldorf education and other initiatives established by Steiner grow, the ideas he propounded continue to be a source of lively conversation, as a model for advocates for homeschooling and for parents seeking pedagogical approaches that offer an alternative to the standardized core curriculum and high-stakes testing in public schools.

Waldorf education has grown from its humble beginnings in North America to include more than 160 independent schools across the continent, 250 early childhood centers, 17 teacher preparation institutes, 1 school entirely adapted for children with special needs, 1 school adopted by Native Americans, and 8 schools with educational programs designed in partnership with farms practicing organic or biodynamic agriculture. With more than 1,000 Waldorf schools in more than 60 countries, more than 2,000 Waldorf early childhood programs on five continents, and more than 600 institutions for curative education, Waldorf education is truly global.

P. Bruce Uhrmacher

See also Moral Development: Lawrence Kohlberg and Carol Gilligan; Piaget, Jean; Progressive Education and Its Critics; Religious Education and Spirituality

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Website

Association of Waldorf Schools of North America: <http://www.whywaldorfworks.org/>

WHITEHEAD, ALFRED N.

Alfred North Whitehead (1861–1947), the British mathematician, philosopher, and educational theorist, is best known for his work with Bertrand Russell (1872–1970) on the foundations of mathematics in the three-volume *Principia Mathematica* (1910, 1912, 1913). He is, however, also known for his views on education, including his claim that abstract ideas must be related to students' experience and interests for them to learn. This entry discusses central concepts in Whitehead's theory of education and his lasting influence in the field.

During the publication of *Principia Mathematica*, Whitehead left the University of Cambridge for London, and he had no permanent position until 1914 when he became professor of applied mathematics at Imperial College.

While he was in London, Whitehead became increasingly interested in questions of education. His interest was sparked by serving on numerous committees engaged in educational reform in the schools of London and beyond. His position as chair of the Delegacy administering Goldsmith's College, a prominent institution engaged in teacher education, is further evidence of his concern for school reform. As dean of science at the University of London, he was involved in the administration of an urban university quite different from the universities of Oxford and Cambridge. Whitehead's (1911/1948) initial

focus was on mathematics education, including an introductory university text for “anyone wishing to study the subject for its intrinsic interest” (p. 187). To frame mathematics as integral to a renewed liberal education, he placed himself in the humanistic tradition of Johann Friedrich Herbart (1776–1841) and others (Grattan-Guinness, 2010).

Between 1912 and 1928, Whitehead gave numerous lectures, some of which are collected in *The Aims of Education and Other Essays* (1929/1957), his major contribution to educational theory and philosophy, while *Essays in Science and Philosophy* (1947) also contains several educational writings. After he left London in 1924 to take up a position in the philosophy department at Harvard University, he continued to write about education, particularly the place of business schools in universities for the 20th century.

Inert Ideas

A central theme runs throughout Whitehead’s educational philosophy, namely, the need to relate abstract ideas in any discipline to the concrete, or lived, experience and interests of students. If teachers and professors fail to take these into account, the result will be what he calls inert ideas. In the preface to *The Aims of Education*, Whitehead (1929/1957) states that “the whole book is a protest against dead knowledge, that is to say, against inert ideas” (p. v). He goes on to explain that inert ideas “are merely received into the mind without being utilized, or tested, or thrown into fresh combinations,” so that instead of engaging students who can use them in the active and imaginative pursuit of knowledge, they become lifeless and result in “mental dry rot” (pp. 1, 2).

To avoid the danger of inert ideas, whatever is taught should connect to the lives of students, which Whitehead (1929/1957) describes in the following terms: “that stream, compounded of sense perceptions, feelings, hopes, desires, and of mental activities adjusting thought to thought, which forms our life” (p. 3). He uses the metaphor of the stream to indicate the fluid and open-ended character of all human experience. While the refinement of sense experience and the capacity to utilize ideas are important aspects of intellectual education, feelings, hopes, and desires constitute the deep emotional currents without which learning cannot take place. Put differently, ideas should tap into both students’ cognitive interests and their aspirations and emotional lives to fully come alive. Moreover,

the educator’s own ideas should spring forth from a lifelong passion for their importance, so that they can provide the right environment for learning to take place.

The Art of Life

Ultimately, however, Whitehead believes that the impulse to learn comes from within the students, and the goal of education is to encourage the full development of their capacities. This process, which he refers to as the art of life, enables individuals to realize their full potential in the context of the specific environment in which they find themselves. “Each individual,” he writes, “embodies an adventure of existence. The art of life is the guidance of this adventure” (Whitehead, 1929/1957, p. 39). The challenge for educators and students alike is to maintain a sense of the adventurous journey toward an understanding of life—its possibilities and obstacles—so that they can recognize the different ways to further their own flourishing even when confronted with failure (Scarfe, 2009).

The most powerful way for students to feel the value of adventure in their own lives is through a “sense of beauty, [or] the aesthetic sense of realized perfection” (Whitehead, 1929/1957, p. 40), which is best taught by means of art in all its forms: music, drama, painting, sculpture, and the crafts of carpentry, metalwork, and cooking. In each case, a student learns to express aesthetic impulses by creating material objects through a unity of “headwork” and “handwork” in a manner rarely utilized in education. Furthermore, if a sense of beauty were encouraged among both students and the general populace, the alienation of “herded town populations, reared in a scientific age” would be mitigated (Whitehead, 1929/1957, p. 41). Whitehead’s goal was to avoid what he saw as the extremes of the Russian revolution, the killing fields of the First World War, and the growing economic and political crises of the 1920s. His own vision of the kind of society to which education should aim was articulated in a lecture to technical school students in London in 1919:

In the democracy of the future every man and every woman will be trained for a free intellectual life by an education which is directly related to their immediate lives as citizens and as workers, and thereby elicits speculations and curiosities and hopes which range through the whole universe. (Whitehead, 1947, p. 172)

Whitehead's conception of a democratic society is one in which men and women can fully participate as citizens and workers. For this future to be realized, education should connect directly to their lives, their hopes and interests, by allowing them to engage in a speculative search for knowledge without any limits.

Rhythmic Cycles of Growth

Whitehead's (1929/1957) most famous contribution to educational philosophy is his account of learning as a process in which human beings pass through three rhythmic cycles of growth: romance, precision, and generalization. While each cycle has its own distinctive rhythm, they overlap with one another in ways that allow the student to utilize aspects of each cycle as they develop. Because the energy initiating and promoting learning is primarily internal, the entire process is organic and quite unlike the construction of a machine. This account is not only different from but also opposed to the behaviorism of John B. Watson (1878–1958), a contemporary of Whitehead who conceived of the learner as a stimulus-response mechanism.

Romance is a prolonged period in which the child is encouraged to pursue his or her innate curiosity, wherever it may lead. Unless a student experiences "the joy of discovery . . . the vividness of novelty . . . [and] unexplored connexions" (Whitehead, 1929/1957, pp. 2, 17) at the core of this cycle, learning is likely to be regarded as a chore that fails to arouse excitement. But if the enjoyment that accompanies children's own sense of adventure is allowed to flourish, they will pose questions for themselves, seeking answers that enhance their experience and strengthening their interests in ways that further a sense of wonder. Since the dominant rhythm of romance is freedom, the role of the educator is one of simply selecting an environment "to suit the child's stage of growth . . . adapted to individual needs" (Whitehead, 1929/1957, p. 32).

Only when the cycle of romance has achieved its full course are students likely to appreciate the need to learn the "grammar" of any discipline like mathematics, its "exactness of formulation" (Whitehead, 1929/1957, p. 18), or rules and procedures constituting the cycle of precision. The distinguishing rhythm of precision is discipline, or more precisely a self-discipline, which furnishes further growth. While precision is a necessary phase in the process of learning, there is a danger that it can kill romance.

As a result, the educator must allow the student to push forward lest the love of learning disappear, for "in respect to precise knowledge, the watchword is pace, pace, pace. Get your knowledge quickly, and then use it" (Whitehead, 1929/1957, p. 36). The danger of inert ideas is always present if a student remains too long in the cycle of precision and is not permitted to utilize self-discipline in challenging and practical ways.

Once the students have gained the ability to pursue knowledge in a disciplined manner, they move to the third of the overlapping cycles, generalization, or "the fruition which has been the goal of the precise training" (Whitehead, 1929/1957, p. 19). Here, they learn to relate abstract principles and ideas to concrete facts, including those emergent from their own experience. Unlike the cycle of precision where the student learned the detailed structures of any discipline, the cycle of generalization "is the stage of shedding details in favour of the active application of principles, the details retreating into subconscious habits" (Whitehead, 1929/1957, p. 37). Once again, the rhythmic pulse of this cycle is freedom but a broader, deeper freedom than in romance, strengthened by the knowledge and experience gained in the previous cycles. Nor are the cycles over with, since students in generalization are once again approaching a romantic understanding of knowledge and are capable of pursuing a lifelong process of learning in which they integrate aspects of all three in their self-development.

As this process progresses, so also can wisdom grow. Knowledge is a necessary condition for wisdom, but wisdom goes beyond it in the following ways:

Now wisdom is the way in which knowledge is held. It concerns the handling of knowledge, its selection for the determination of relevant issues, its employment to add value to our immediate experience. This mastery of knowledge, which is wisdom, is the most intimate freedom obtainable. (Whitehead, 1929/1957, p. 30)

Wisdom is the unity of knowledge, value, experience, and freedom. It increases the value of the students' experience by guiding the ways in which they approach knowledge with a view to selecting how best to use it. Wisdom enables students to bring together theory and practice to apply their understanding to real issues facing them in life. In doing so, the students learn to engage in the kind of free

inquiry that would otherwise escape them. And this practice of freedom is, as Whitehead (1933/1967) puts it elsewhere, “a primary human need,” which has been denied to the majority of humankind even though it “belong[s] to the very definition of the species” (p. 66).

Whitehead's Influence

In comparison with John Dewey (1859–1952), Whitehead has had less influence on the theory and practice of education. Nevertheless, in recent years, there has been a revival of interest not only in Whitehead's educational theory but also in his process philosophy, so called because of his belief that every entity is in the process of change or becoming.

The Japan Society for Process Studies has been in existence for more than 30 years, while the Australasian Association for Process Thought publishes two online journals, and the Whitehead Society of Korea attracts many professionals interested in his educational theory. In Europe, the *Chromatiques whiteheadiennes*, a network established in 2000 by Michel Weber, is now conjoined with several other academic organizations “to bring together research on the different aspects, nuances and implications of Whitehead's thought” (Weber, 2010, p. 36). This has involved sponsoring conferences, publishing proceedings and monographs, and establishing a non-profit publishing company, which recently produced a French translation of Whitehead's major educational work, *Les visées de l'éducation et autres essais* (*The Aims of Education and Other Essays*, 2011).

In Canada, the University of Saskatchewan Process Philosophy Research Unit focuses on Whitehead's educational philosophy and has sponsored two international conferences, the proceedings of which were published in *Interchange: A Quarterly Review of Education*. Its codirectors have been members of the board of trustees of the Association of Process Philosophy of Education and the executive of the International Process Network. The latter organization was formed during a conference at the Center for Process Studies (CPS) at the Claremont Graduate University, Claremont, California, which has been a hub for Whiteheadian scholars since 1973.

Arguably, the most successful of CPS's international initiatives has been the China Project. Fourteen centers for process-oriented research have been established at various universities throughout the People's Republic of China since 2002.

At Zhanjiang University, research is focused on education, while at Wuhan and Beijing Normal universities, the main interest is in philosophy, and at Shanghai University, the focus is on sustainable urbanization. The Chinese attraction to Whitehead's process thought may well be because of its rapprochement with Daoism (Schindler, 2005).

In light of this international interest in Whitehead, are there any schools to be found based on his educational philosophy? John Cobb, the founding director of CPS, argues that Whitehead's vision of education could become a reality if certain conditions were met. Perhaps the most important of these is the realization that education is far more than schooling, “so we would want the boundaries between school and community to be fluid” (Cobb, 1998, pp. 105–106) in ways that integrate the process of learning with the life of the community. In place of the individualism and competition dominant in many schools today, Cobb (1998) suggests that

in a Whiteheadian school, there would be a great deal of emphasis on students teaching one another and working together on shared projects, with their distinctive contributions to these projects fully acknowledged. (p. 107)

Given the importance of the rhythmic cycles of growth, precision would be important, “but it would be guided by the interests gained in romance and geared towards ways of realizing visions of what might be” (Cobb, 1998, p. 110). These imaginative visions would be grounded in the practice of generalization and carefully evaluated on the basis of what students already know.

While examples of this kind of schooling may be difficult to find in the West, in China, there is a growing movement to establish schools along Whiteheadian lines (Phipps, 2003). Nor is this as ironic as it may seem, given Whitehead's own statement in *Process and Reality* (1929/1978) that his philosophy “seems to approximate more to some strains of Indian, or Chinese, thought than to . . . Western thought” (p. 10).

Howard Woodhouse

See also Behaviorism; Daoism; Dewey, John; Herbart, Johann F.; Russell, Bertrand; Spectator Theory of Knowledge

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WITTGENSTEIN, LUDWIG

Ludwig Wittgenstein (1889–1951) was one of the most fascinating, conflicted figures in the history of philosophy. Born to an aristocratic family in Vienna, one of eight talented children, three of whom committed suicide, Wittgenstein was both a brilliant and enormously influential philosopher and, as a man, often tormented by self-doubt and even self-contempt. His complex, contradictory feelings about his family's Jewish background; his own sexuality; and the nature of genius (and whether he was one), all surfaced in writings published after his death. For most of the 20th century, he was the towering figure in Anglo-American philosophy, the producer of two books, the *Tractatus Logico-Philosophicus* (1921/1961) and the posthumously published *Philosophical Investigations* (1953), each of which in its own way revolutionized philosophy. An aristocrat, prisoner of war, sometime recluse, a man who abandoned philosophical work for a decade to work as a school teacher, a part-time gardener, and an architect, Wittgenstein's love-hate relationship with philosophy is best exemplified in his frequent advice to Norman Malcolm and others of his best students to quit philosophy and do something "useful" with their lives.

There are two ways to assess Wittgenstein's influence on philosophy of education: One is through the influence of the philosophical theories advanced in the *Tractatus* and the *Investigations*; the other is through direct analysis of his scattered but substantial comments on teaching and learning themselves. A number of philosophers have produced a substantial body of work on Wittgenstein's significance to educational thought.

Tractatus Logico-Philosophicus

It is perhaps a hallmark of Wittgenstein's writings that different readers take quite different meanings away from encounters with his work—diverging sometimes even from his own notion of what he was trying to accomplish. The *Tractatus* is credited with inspiring the group of philosophers who made up the Vienna Circle and whose work gave rise to the

movement of logical positivism. Yet Wittgenstein consistently refused to endorse their interpretation of his work.

The central purpose of the *Tractatus* is to provide a rigorous analysis of the conditions of truth: what it means to say something that is true. In a series of numbered, succinct logical steps, he tried to present what is called “the picture theory of language.” For Wittgenstein, our propositional assertions need to be compared and tested against the world, or, as he puts it, “what is the case.” The world has a logical structure, and language has a logical structure: When we endeavor to express truths about the world, we create a “picture” in language that has the same logical form as the state of affairs it means to represent; truth resides in this homology of logical form between the “picture” and the structure of reality (just as we judge other pictures, Wittgenstein says, by how well they represent the world).

It is an easy step from this argument to the “verificationist” views of Moritz Schlick and the Vienna Circle: “The meaning of a proposition is its method of verification.” Any assertion that cannot be verified is, for the logical positivists, meaningless—literally “nonsense.” Similarly, for Wittgenstein (1921/1961), the problem is to demarcate what can and cannot be said:

The correct method in philosophy would really be the following: to say nothing except what can be said, i.e. propositions of natural science—i.e. something that has nothing to do with philosophy—and then, whenever someone else wanted to say something metaphysical, to demonstrate to him that he had failed to give a meaning to certain signs in his propositions. Although it would not be satisfying to the other person—he would not have the feeling that we were teaching him philosophy—this method would be the only strictly correct one (Proposition 6.53).

And the famous, enigmatic closing line of the *Tractatus* is as follows:

Whereof one cannot speak, thereof one must be silent (Proposition 7).

But, significantly, Wittgenstein takes this conclusion in an entirely different direction than the logical positivists; he made clear in a number of comments that the things about which we cannot speak (in a scientific, propositional sense) are actually the most important things in life—art, ethics, emotions, and religious belief.

Philosophical Investigations

Wittgenstein produced the first part of the *Investigations* while he was alive; the second part, like all of his posthumous works, was compiled by editors from his *Nachlass*—some 20,000 pages of his unpublished papers and notebooks. While the book covers a sweeping array of topics, the most discussed sections relate to language, how we learn it, and how we use it, drawing from a range of ideas that have almost taken on a life of their own: language games, forms of life, family resemblance, learning rules and how to follow them, and a conception of philosophy as “showing the fly the way out of the fly bottle.” In contrast with the arid, minimalist style of the *Tractatus*, it is a much more meandering, oblique work, full of metaphors and analogies, thought experiments, case studies, and questions more than propositional assertions. Terry Eagleton (1993) called it “a thoroughly dialogical work, in which the author wonders out loud, imagines an interlocutor, asks us questions . . . forcing the reader into the work of self-demystification” (p. 9).

It is significant that the *Investigations* begins with an account of how one learns language: Rather than mapping the boundaries of what can and cannot be said, the view of language in this book is far more pluralistic and pragmatic. There are many “games” we play with language (“Giving orders, and obeying them . . . Play-acting . . . Making a joke . . . Translating from one language into another . . . Asking, thanking, cursing, greeting, praying” [Wittgenstein, 1953, § 23]), and the rules differ among them. Logical and scientific uses of language are in no way privileged here.

The core of Wittgenstein’s (1953) argument about language, and the ways in which this project differs from the *Tractatus*, can be captured in these quotes:

For a large class of cases—though not for all—in which we employ the word *meaning* it can be explained thus: the meaning of a word is its use in the language. (§ 43)

Philosophy may in no way interfere with the actual use of language; it can in the end only describe it. (§ 124)

This pragmatic tone runs throughout the *Investigations*, much of which indeed reads as a kind of linguistic anthropology or developmental psychology: The mark that one has understood and learned a rule (any kind of rule, although

Wittgenstein's example is mathematical) is solely that one "can go on"—that is, the criterion is performative rather than internal or intellectual. This way of reading Wittgenstein makes his import for education clear.

Wittgenstein the Pedagogical Philosopher

For a philosopher of education, the striking thing about Wittgenstein's later work is the frequency and variety of examples he takes from teaching and learning. The *Investigations* begin, as noted, with the question of how one learns language, and not just language, but a plethora of language *games*, each with its own rules. What it means to learn a rule and how one learns to follow a rule so that one can say, "*Now I can go on*," is one of the most striking topics in the *Investigations* to which Wittgenstein returns again and again. What it means to teach in those contexts that cannot be *said* but only *shown* explores an important, fascinating topic that has been called "tacit teaching." C. J. B. Macmillan calls this Wittgenstein's *pedagogical turn*: "We often find him turning from a consideration of the meanings of a term or concept to ask, 'How was this learned?' or 'How would you teach it?'" (Macmillan, 1984, p. 7).

Wittgenstein's latter work is full of examples like the following:

In teaching you philosophy I'm like a guide showing you how to find your way round London. I have to take you through the city from north to south, from east to west, from Euston to the embankment and from Piccadilly to the Marble Arch. After I have taken you [on] many journeys through the city, in all sorts of directions, we shall have passed through any given street a number of times—each time traversing the street as part of a different journey. At the end of this you will know London; you will be able to find your way about like a Londoner. Of course, a good guide will take you through the more important streets more often than he takes you down side streets; a bad guide will do the opposite. In philosophy I'm a rather bad guide. (Gasking & Jackson, 1967, p. 51)

Indeed, it can be argued that the very form of presentation in Wittgenstein's later works is *pedagogical*: His frequent use of examples, thought experiments, analogies, questions, and passages beginning with terms like "Imagine . . .," "Think . . .," or "Consider . . ." all suggest an invitation to the reader into a particular mode of thought.

Wittgenstein is trying to teach us the way out of the fly bottle of misconceptions and unproductive ways to think about philosophical problems, often caused through unexamined uses of language.

Nicholas C. Burbules

See also Continental/Analytic Divide in Philosophy of Education; Positivism

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WOLLSTONECRAFT, MARY

An early modern English educator and writer who is often named the "mother" of feminist thought, Mary Wollstonecraft (1759–1797) has been cited also as an early socialist philosopher and as an abolitionist. An independent woman who educated herself among revolutionary intellectuals, she remains most famous for *A Vindication of the Rights of Woman* (1792), whose ideal of the educated woman Jane Roland Martin reclaimed for philosophical study in 1985. Wollstonecraft's classic treatise concludes with a thought experiment

that makes perhaps the earliest argument for government-funded universal day schooling of English children—for which purpose she constructed a normative concept of republican coeducation as a moral antidote to monarchist miseducation, which she theorized from her own direct observations and experiences.

Wollstonecraft's complete oeuvre became readily accessible for educators' theoretical study in 1989. She wrote her earliest educational thought in various modes: a parents' guidebook, *Thoughts on the Education of Daughters* (1787); an autobiographical novel of education, *Mary: A Fiction* (1788); a popular book for children's moral and critical education, *Original Stories From Real Life* (1788), which later her friend William Blake illustrated (1791); a curriculum, *The Female Reader* (1789); and *A Vindication of the Rights of Men* (1790), whose argument Thomas Paine repeated a year later in his classic *Rights of Man*. These works reflect Wollstonecraft's developing understanding of monarchism's theological, ontological, aesthetic, political-economic, ethical, and educational problems—as well as her practical concern to devise pedagogical and curricular strategies for resistance against it.

Wollstonecraft planned to write a second volume of *A Vindication of the Rights of Woman* focusing on the distinctive challenges women faced living and mothering in poverty—some of which she examined in *Maria, or the Wrongs of Woman*, an incomplete novel posthumously published along with another incomplete manuscript of parental *Lessons* (1798) for infants at home. These many works along with other Wollstonecraft documents and artifacts became curriculum for her two orphaned daughters' self-education, thus directly inspiring Mary Wollstonecraft (Godwin) Shelley's educational thought in *Frankenstein* (1818).

Revolutionary Self-Education

Wollstonecraft's legacy to educational theory includes plentiful records of her living, learning, and thinking at rational odds with conventions of monarchist womanhood that her writings on education critiqued. While mourning her death from childbirth complications, her husband, the anarchist philosopher William Godwin, wrote *Memoirs of the Author of a Vindication of the Rights of Woman* (1798), the first of countless Wollstonecraft biographies to claim her iconoclastic living as itself a major cultural contribution—especially their passionately

egalitarian marriage. However, like Godwin himself, she began adulthood as a marriage resister, motivated to educate herself. Having come of age in downwardly mobile, violent family circumstances that limited severely her access to schooling or parental tutelage, she left home to work, seeking a new occupation every time a position became oppressive, until she had tried every kind of work then open to Englishwomen outside the aristocracy, except common prostitution. Thus, she learned to understand the political-economic structure of Georgian womanhood.

Meanwhile, pragmatically adapting John Locke's educational thought to her own material constraints, Wollstonecraft sought higher learning from generous mentors among her best-educated neighbors—who included an itinerant lecturer, several clergymen, Samuel Johnson, and most especially Edmund Burke's critical scapegoat, Dr. Richard Price, along with the painter Henry Fuseli and other avant-garde artists and intellectuals, whose pictures and writings her own lifesaving liberal patron Joseph Johnson published. Thus educated, Wollstonecraft, her sisters, and her beloved friend Fanny Blood established a village school for religious dissenters' children. As a schoolteacher and later also as a governess, she began reading, thinking, and writing explicitly about education. Learning languages by translating, she encountered Jean-Jacques Rousseau's educational portrait of Sophie with scornful critical brilliance. She read and critiqued popular thought on women's education by many other European Enlightenment men and women as well, but Catharine Macaulay influenced Wollstonecraft's own educational thought most directly.

Her self-education's last phase emulated Locke's notion of higher learning via travel. Going to Paris in 1792 as a correspondent, she witnessed the French monarchy's bloody end along with new freedoms the French Revolution offered women; researched and wrote *An Historical View of the Origin and Progress of the French Revolution* (1794); and collaborated with French republican leaders and English friends, including Paine, on educational policy planning. As a suicidal single mother recovering from a romantic heartbreak and the traumatic Reign of Terror, she then documented her higher learning through travel northward in *A Short Residence in Sweden, Norway, and Denmark* (1796), a contemplative epistolary narrative that Godwin admired and that literati regard now as her finest work of writing.

Monarchist Miseducation

In Chapter 2 of *A Vindication of the Rights of Woman*, Wollstonecraft described “the most perfect education” as fundamentally moral, as “such an exercise of the understanding as is best calculated to strengthen the body and form the heart.” Even while arguing for universal schooling, Wollstonecraft never reduced her view of education to schooling. Her own necessary pursuit of self-education, in an empire-nation that took a laissez-faire stance toward education (but not religion), led her logically to attribute educational agency and consequence to its entire culture—its religion, arts and sciences, professions, political economy, intimacies, and reproductive customs, no less than its schools.

On these premises, she theorized monarchist culture’s miseducation of men, women, and children. Founded on the Divine Right of Kings and its principal corollaries, “the divine right of husbands,” of fathers, and of parents, this cultural order miseducated both sexes by classifying women as men’s property, as animals and slaves, incapable of moral responsibility and worthy of abuse. Doubting any idolized monarch’s claim to be an educated man, she identified idolatry, irrationality, and inhumanity in myriad details of both sexes’ miseducation, aimed ever at emulating and pleasing the monarch, literal or figurative. Her analysis of that miseducation debunked its fallacious conception of “sexual character” as constructed on artifice, prejudice, and docility (both male and female weaknesses). She protested the sexual economy premised on it, a property system that enslaved Africans and women, neglected and abused children, and undermined professional ethics. Explaining how its double standard of sexual morality sabotaged both marriage and child rearing, she also critiqued both private and public educators who reproduced sexual character—tutor, governess, schoolteacher, and educational theorist—as professionals confined by the Divine Rights structure to be agents of miseducation. That critical analysis laid the foundation for Wollstonecraft’s normative concept of republican coeducation.

Republican Coeducation

Often so conceptually thin that it means little more than both sexes’ presence together in one setting, coeducation in practice can aim to cultivate clear or blurry sex distinctions, inequality or equality, and domination or mutuality. Aiming to test the

untried possibility of women’s moral learning for full humanity, Wollstonecraft understood the concept in a thicker, more nuanced normative sense. She proposed that if educators would not require children’s ceremonial worship, but instead encourage their freedom to engage with one another in rational religious inquiry and to wander outdoors alone among natural earthly wonders, girls no less than boys could learn moral responsibility through their own direct communion with, and intelligent love for, a rational and just God—vital to their freedom from idolatrous dependence on human tyrants. Coeducation should aim to “confound” gender distinctions without tyrannizing sexual self-expression, by cultivating mental and physical strength as well as moral beauty in both sexes. For, redefining strength and beauty, Wollstonecraft idealized health, rationality, and truthfulness in either sex, rather than “masculine” brutal capacity or “feminine” weak appearance. Coeducation should enable women to learn to exercise full responsibility as independent citizens, working with men in morally worthy professions and businesses. By teaching honestly about human sexuality and reproduction and by sharing most learning experiences together, Wollstonecraft thought both sexes could be taught to befriend each other without exploitative and deceptive manipulations—and thus prepare for marital friendship as parental partners. Condemning reliance on hired wet nurses, she argued that parents could learn from each other while learning to care for their infants at home, but she proposed a health curriculum to prepare girls for motherhood, which she denied to boys. Thus, she neglected male education for equally, mutually shared child rearing, while claiming unprecedented scientific knowledge and moral educational agency for mothers. Wollstonecraft envisioned significant cultural sites for republican coeducation in both tax-funded day schools and private homes as well as in professions, parliamentary government, and print media. But emphasizing coeducation in sciences while failing to challenge the marginal curricular status that Locke had assigned to the arts, she devalued explicit education of imagination, a feature of her own revolutionary self-education that might be necessary to develop such moral coeducational schooling and culture.

Susan Laird

See also Gender and Education; Liberalism; Locke, John; Martin, Jane Roland; Right to an Education; Rousseau, Jean-Jacques

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YOUNG, IRIS MARION

Iris Marion Young (1949–2006) was professor of political science at the University of Chicago, where she was affiliated with the Gender Studies Center and the Human Rights Program. Her theorizing and critical social analysis has been influential in political philosophy, critical social theory, and feminist scholarship in general as well as in different other disciplines, such as urban planning (Fainstein, 2010), health research, dance, and performance theory. Throughout her academic career, her scholarly work was complemented and influenced by her activism and participation in various movements, forums, and initiatives (Ferguson & Nagel, 2009). Today, her work continues to be widely present also across many disciplines associated with education, including philosophy of education, education policy, sociology of education, multicultural education, feminist and critical pedagogy, multilingual education, disability studies, and citizenship education (Sardoč, 2006). Her books include *Justice and the Politics of Difference* (Young, 1990a); *Throwing Like a Girl and Other Essays in Feminist Philosophy and Social Theory* (Young, 1990b); *Intersecting Voices: Dilemmas of Gender, Political Philosophy, and Policy* (1997); *Inclusion and Democracy* (Young, 2000); and *Responsibility for Justice* (Young, 2010, published posthumously).

Major Theoretical Themes

Young's work draws from the intellectual traditions of Marxism, egalitarianism, structuralism, feminism,

and phenomenology, and from scholars as diverse as John Rawls, Jürgen Habermas, Herbert Marcuse, Michel Foucault, Simone de Beauvoir, Jacques Derrida, and Maurice Merleau-Ponty. Young's basic position has been characterized by her criticism of political theory's *positivism* as "too often assuming as given institutional structures that ought to be brought under normative evaluation," and its *reductionism* represented by a "tendency to reduce political subjects to a unity and to value commonness or sameness over specificity and difference" (Young, 1990a, p. 3). Her departure from normative theorizing that fails—so she claimed—to fully encompass the concrete realities of structural inequality has been both methodological and conceptual.

Unlike ideal type theories that are largely abstracted from historically specific circumstances and decontextualized from a concrete social environment, she argued for a "socially and historically situated normative analysis and argument" (Young, 2000, p. 10). Young's "non-ideal" approach to normative and conceptual problems of social justice, citizenship, difference, inclusion, democracy, solidarity, and responsibility questioned both the neutrality and impartiality of the standard liberal paradigm most commonly characterized by a "difference-blind approach to politics and policy" (Young, 2007, p. 60).

Although Young did not reject the basic liberal premise of justice as the first virtue of social institutions (Rawls, 1971), she did advance a critical conception of justice that challenged the distributive paradigm of social justice in two separate respects. As both the expansion of the status of citizenship and the extension of citizenship rights to previously

excluded and marginalized groups has not resulted in freedom and equality for all members of the polity, social justice should strive to overcome domination and oppression embedded in existing social structures (Young, 1990a, chaps. 1 and 2). At the same time, her analysis of structural injustice related to inequalities associated with gender, disability, race, and sexuality led to the assertion that social justice should not cover only a society's basic structure but should also address aspects of structural injustice in other social spheres—for example, family life.

Equally challenging was her criticism of the liberal version of the rights-based conception of citizenship and its “normative ideal of the homogeneous public” advanced in her landmark essay “Polity and Group Difference: A Critique of the Ideal of Universal Citizenship.” Here, she articulated the conception of differentiated citizenship as an alternative to the allegedly discriminatory and assimilationist conception of equality as sameness that transcends particularity and ignores differences. Given the fact, as she maintained, that the “extension of equal citizenship had not led to social justice and equality” (Young, 1989, p. 250), the recognition of equal membership for each and every member of a polity needs to move beyond an essentialist understanding of difference that ignores the political significance of group differences as well as the moral and epistemic value of the public acknowledgment of diversity. This requirement of difference sensitivity marked a turning point in contemporary discussions on citizenship and citizenship education.

Building on her criticism of the dominant paradigm of social justice and her rejection of a difference-blind conception of civic equality, she distinguished between two separate dimensions of the politics of difference articulated most fully in *Justice and the Politics of Difference*—namely (1) the politics of positional difference and (2) the politics of cultural difference (Young, 2007). This distinction challenged some of the controversies and tensions stemming from the intersection of the politics of redistribution and the politics of recognition (Fraser, 1995).

Yet not all of Young's ideas and analyses have been equally influential or recognizable. In fact, one of the most overlooked elements of her analysis of structural inequality has been her critique of the meritocracy-based conception of equal opportunities and the hierarchical division of labor, in which it is held that an individual's social status and social

mobility depend in large part on her achievements and overall success in the process of education (Young, 1990a, chap. 7).

These and other ideas and analyses place Young as one of the most original and discerning scholars in both philosophy and political science, whose impact and relevance in educational theory and philosophy can be interpreted as twofold. First, she strongly advocated for broadening the category of what is considered educationally relevant, in both orientation and type of questioning. Second, she maintained that institutional change that aims to overcome exploitation, marginalization, subordination, and exclusion can be upheld through the bonding of the relationship between theory and practice.

Mitja Sardoč

See also Citizenship and Civic Education; Critical Theory; Diversity; Ethnicity and Race; Feminist Ethics; Gender and Education; Identity and Identity Politics; Multiculturalism

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YOUTH CULTURE, THEORIES OF

Most accounts of the formation of a construct called *youth culture* converge on the advent of industrialism and an accompanying modernist shift in general cultural practices as the forces that moved theorists to cast youth as an object of scholarly interest. From Margaret Mead's *Coming of Age in Samoa* (1928/2001) to the University of Chicago's urban street sociology (e.g., Becker, 1963) and the Centre for Contemporary Cultural Studies at the University of Birmingham (e.g., Hebdige, 1977), scholars have argued that youth in modernized societies experience social conditions that lead them to band together, thus producing youth cultures, or what many scholars at the time referred to as subcultures. The use of the term *subcultures* implicitly positioned youth as players in larger cultural forces but also depicted them as reactive and resistant to those forces because of their banding together to engage in deviant acts. This entry describes the development of youth culture studies and its relevance for educational research and classroom practice.

Youth Culture and Identity Formation

The power of the youth subcultural collective was also its weakness. Engaging in the practices of the collective (e.g., bikers, punk rockers), theorists argued, was powerful because it gave the youth a voice, but it also reproduced the working-class status of the youth, because they were seen as deviant or resistant and thus struggled to achieve within a capitalistic school structure (cf. Willis, 1977). The emphasis on the collective nature of youth cultural activity, however, shifted with three changes in global social dynamics. These global social shifts in turn led to changes in scholarship on youth culture.

The first social change was to refocus attention from the collective nature of youth (sub)cultural activity to theories that suggested youth cultural activities represented a search for individual identity and place in a fast-paced, fragmented, and globally postmodern world. Youth culture theorists shifted

their thinking about the importance of the collective, at least in part, because postmodern and post-colonial theories called into question the meaning of singular ethnic, racial, or cultural identities and highlighted the need to navigate multiple and shifting identities. As a result, youth cultural theorists and researchers, such as Stuart Hall (1995), began to document the ways that youth cultural affiliations were about complex interactions of ethnicity, race, class, and gender with shifting locations or sense of place that produced a fragmented sense of self. These fragmented identities motivate youth to seek ways to root themselves in memberships within social networks or in connections with others.

This turn away from the collective to the individual in youth cultural theory motivated a second change in the attention of youth cultural theorists from a focus on the unique and exotic White male to the everyday lives of all young people using popular culture to have fun, to make social connections and identifications, or to make meaning—rather than seeing youths as resistant subcultural actors. Numerous studies from that time period forward (e.g., Lewis & Fabos, 2005; Moje, 2000) have sought to document how and why youth engage in particular practices to make meaning, experience pleasure, and feel fulfilled, rather than to resist, even when those youth are members of what might be termed *subaltern* or *marginalized* groups.

This shift from casting youth cultural groups as a collection of deviants to a grouping of individuals seeking to make meaning in their lives also may have been motivated by changes in the youth cultural theorists and researchers themselves. Early theorizations of youth culture confined themselves to textual analyses or to survey research. As researchers began to engage in long-term, intensive, and intimate ethnographic research, what seemed strange may have merely become more familiar. In addition, what counts as youth or adolescence has stretched, and many adults in contemporary society adopt contemporary popular cultural tastes, passions, and pursuits rather than cling to the music, styles, or media from when they themselves were young. Adult theorists' willingness to see contemporary youth culture as less resistant and more about pleasure seeking or meaning making may have occurred because the researchers share practices with the youth they study. It may also be, as noted above, that academia is itself shifting, so that the people conducting the research embody a broader range of practices as a result of

greater diversity in the academy with respect to gender, race/ethnicity, and sexual identity.

The third change was prompted by attention to mass information and social media and particularly to the exponential growth of digitized social media that has posited youth as the change makers in a new world order. Such work has shifted attention from studies of deviant, struggling, or resistant “sub-cultural” youth to studies of powerful, sophisticated users of technologies, including social networking tools, fan fiction-writing sites, and a vast range of single- and multiuser games. Indeed, this move into studying how youth gather around the use of social media has expanded youth cultural studies to include a range of youth across multiple nations.

Several points are worth noting here. First, it is rare to read cultural studies of average or lower-middle-class youth—those who are neither poor nor seriously disadvantaged but are just getting by. Researchers of youth culture should consider attending to such groups because this demographic may increasingly represent the bulk of young people in the United States and other societies. Second, analyses of youth as makers of youth cultures tend to present youth cultural activity as sophisticated, generative, and endlessly adaptive, whereas youth cultural studies of poor youth of color tend to suggest that these youth, although creative and engaged, not only are left out of the power circles engendered by access to sophisticated media and literacy tools but also are kept from those circles. For example, youth who regularly play multiuser strategy games such as *Civilization*, *Sim City*, or *World of Warcraft* have opportunities to develop knowledge, social practices, and metacognitive skills valued in school and the workplace. Such games, however, require high-speed Internet connections, relatively expensive software, and sophisticated hardware. Young people who can afford, at best, a smart phone with a minimal data plan can play single-player, action games that might afford opportunities to develop coordination and some strategies but do not provide the same access to cognitive and social development. Finally, and most important, regardless of where these youth sit on the socioeconomic and power scale, they are generally represented as disaffected from schooling and, possibly, from the social world that produced them. The next section of this entry examines three recent trends in youth cultural and education studies and their import for education theory and research.

Trends in Youth Culture and Education Studies

Scholars who focus on the digital practices of youth and youth cultural groups have theorized and documented possibilities for learning from game designs, social media, and Internet-based writing networks that captivate youth attention and have started to consider designs for school-based learning environments and curricula that might be equally captivating (e.g., Gee, 2007). Digital tools allow learners to take action in their lives and craft not only new identities but also new learning opportunities. It is possible to turn classroom practice into spaces for such agency, performativity, and circulation to advance student learning.

Similarly, youth cultural theorists and those who work with youth—not to study their cultural practices but to develop them—suggest that scholars can learn from attention to youth practices with social media, both electronic and paper, to help them learn how to engage in positive social action for change (e.g., Bruce & Bishop, 2006). In contrast to the emphasis on translation to classroom practices for the purpose of advancing student learning, these projects draw from what scholars have learned about youth cultures to entice youth into projects designed to advance social change. Those interested in studying youth cultures must consider the worlds that *youth* hope to inhabit. What is their social future? How can youth cultural scholarship help them shape it?

To address those questions, as some scholars have recommended, youth cultural theorists interested in developing theories to guide education practice should not attend to detailing the cultural practices and outcomes of youth on the basis of ethnicity, race, culture, gender, or “subculture,” but they should try instead to build theories based on the concept of navigating the many identities and cultures youth encounter in and out of school. According to Django Paris (2012), for example, scholars should theorize pedagogical practices and build school structures that sustain young people’s cultural identities even as they help them navigate these different practices, discourses, and norms. From this perspective, it is incumbent on youth cultural scholarship in education to attend to the ways that youth in this global and continually shifting world develop the agency that comes with the ability to navigate, even as they protect the values and practices that they hold dear.

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See also Adolescent Development; Cultural Literacy and Core Knowledge/Skills

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